

Pond Dynamics/Aquaculture Collaborative Research Data Reports

Volume Five, Number Two
Rwanda Project

Cycle III of the
CRSP Global Experiment



Pond Dynamics/Aquaculture CRSP
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**POND DYNAMICS/AQUACULTURE
COLLABORATIVE RESEARCH
DATA REPORTS**

**Volume Five, Number Two.
Rwanda: Cycle III of The Global Experiment**

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FOREWORD

The Pond Dynamics/Aquaculture Collaborative Research Support Program (PD/A CRSP) represents an international community of researchers and institutions dedicated to strengthening health and nutrition in developing countries by improving the efficiency of pond aquaculture systems. It is one of several agricultural CRSPs supported by the U.S. Agency for International Development under the authority of Title XII of the International Development and Food Assistance Act of 1975.

The "Global Experiment" in Pond Dynamics/Aquaculture is the major CRSP research activity, covering the period from 1982 to 1987. The Global Experiment was designed to quantitatively describe the physical, chemical and biological principles of pond culture systems. The information gained from the Global Experiment will be used to improve production technologies and develop quantitative production functions to facilitate rigorous economic analyses of aquaculture systems.

Standardization is a key element of the Global Experiment. Standardization permits the comparison of data from diverse geographic locations. The experimental design involves monitoring specified environmental and fish production variables in accordance with standardized work plans in twelve or more ponds at each of seven geographical locations. The variables observed, frequency of observation, and materials and methods are uniform for all locations. The field data are filed in a centralized data base, called the CRSP Central Data Base. Statistical methods will be used to test hypotheses about correlations between variables and to evaluate the sources of variance within ponds, between ponds within locations, and between locations.

The CRSP Central Data Base will be used to develop predictive models of the processes occurring in pond culture systems. The models will be used to provide guidance for ongoing and future research, to predict the performance of existing and proposed pond systems subject to specific inputs and constraints, and to improve the operation and efficiency of pond culture systems.

The Global Experiment includes three cycles of experiments. Each cycle consists of two series of observations, one during the dry season and one during the wet season. The objective of the first cycle is to create a detailed baseline of chemical, physical, and biological data on all ponds treated with a standard level of inorganic fertilizer. In the second experimental cycle, ponds treated with inorganic fertilizer are compared to ponds treated with organic fertilizer. In the third cycle, the responses of ponds to different levels of organic fertilizer are compared.

The goal of the Pond Dynamics/Aquaculture Collaborative Research Data Reports (referred to as Data Reports) is to record the CRSP Central Data Base and to present interpretations of site specific results. The Pond Dynamics/Aquaculture CRSP has conducted the Global Experiment at seven project sites in six developing countries: Thailand, Indonesia, the Philippines, Panama, Honduras, and Rwanda. The first volume of these reports provides descriptive information for each CRSP site. It presents the physical characteristics of each site, including a geographical sketch, climatology, and water and soil analyses. Experimental cycles are described in CRSP Work Plans One to Three, which are summarized in the first volume.

Volume One will serve as the reference volume for the entire report series. Subsequent volumes will focus on each site separately. Each Data Report will include one cycle (wet and dry seasons) of the Pond Dynamics/Aquaculture CRSP Global Experiment. Therefore, with few exceptions, each project site will have three Data Reports devoted to it, representing the results of the three cycles of the Global Experiment. In addition to the hard copy of experimental data published as a part of each Data Report, data are also available from the PD/A CRSP in electronic form (on diskette) for computer analysis. Cycle III of the Global Experiment in Butare, Rwanda is presented in this volume.

INTRODUCTION

This report summarizes experiments conducted in Rwanda during Cycle III of the Global Experiment of the Pond Dynamics/Aquaculture (PD/A) CRSP. Initial experiments in Rwanda (Cycle I) described the relatively low level of natural productive capacity of ponds in this cool, moist, highland environment and demonstrated the significant base variability existing between ponds (Hanson et al. 1989).

Tilapia culture is practiced in Rwanda at elevations from about 1300 m to over 2300 m, with highly variable results depending on management procedures and the availability of fertilizer materials. Tilapia production in rural ponds ranges from less than 500 kg/ha/yr to over 3000 kg/ha/yr (Hanson et al. 1988, Hishamunda and Moehl, Jr. 1989). The Cycle III experiments were designed to expand the data base established during earlier studies and to examine the relationship between organic fertilizer input rates and tilapia production during wet and dry season culture periods.

The global concern of CRSP research continues to be the elucidation of basic principles of pond dynamics as a basis for the development of rational pond management strategies which are suited to the specific requirements of different pond environments. The Rwandan studies contribute data representing the cooler conditions of highland tropical environments in sub-Saharan Africa.

MATERIALS AND METHODS

Two five-month experiments were conducted at the Rwasave Fish Culture Station near Butare, Rwanda. The station is located in the central plateau of Rwanda at an elevation of about 1700 m. The facilities were designed and constructed with the involvement of CRSP personnel and maintained under the administrative control of the Faculty of Agronomy of the National University of Rwanda.

Nine of the 21 CRSP ponds, each 40 m x 15 m x 0.90 m and having a surface area of 7 ares (1 are = 0.1 ha), were used in each experiment. There were three ponds for each of three treatments. Chicken manure was broadcast over the ponds at rates of 125, 250, and 500 kg/ha/wk on a weekly basis. The manure was analyzed for dry weight, organic matter, and nutrient content.

The wet (W1) and dry season (D2) experiments were conducted consecutively in the same nine ponds, with W1, the earliest of the two, being only the second experiment conducted after construction of the ponds.

Ponds were stocked at 0.833 fish/m² for W1 and at 1.0 fish/m² for D2 using *Oreochromis niloticus* juveniles that had been hand-selected twice to remove females. Mean initial fish weights were 39.9 g and 44.6 g for wet and dry season experiments, respectively.

Extensive limnological and meteorological measurements were taken as prescribed for the standardized Global Experiment (Egna et al. 1987), and as listed in the appendix of this document. Measurements of plankton density were taken from horizontal and vertical plankton net tows twice monthly. Fish stomach contents

were examined from three fish per pond each month. Primary productivity was estimated by light-dark bottle techniques.

Data were analyzed by simple regression and multifactor ANOVA using the Statgraphics Statistical Graphics Program (version 4.0, Statgraphics, 1986), and by Duncan's multiple range test (Ott 1977) with $\alpha = 0.05$.

RESULTS

The wet season experiment (W1) was conducted from 18 December through 15 May 1986. The dry season experiment (D2) began 9 July and ended on 4 December 1986. This five-month experiment extended somewhat beyond the dry season (June-Sept) into the "small wet season" (Figure 1). Mean rainfall was 0.58 cm/d during W1 but only 0.145 cm/d during D2. However, mean solar radiation was 30.89 E/m²/d for both seasons, apparently because of the hazy dry season conditions common at the research site.

Temperature

Ponds at the Rwasave Station tended to stratify during the day and mix by early morning (Figure 2) with mixing occurring an average of four hours and up to eight hours earlier during the wet season than during the dry season. This earlier and longer period of mixing is exaggerated in the comparison of the first diel sampling for the two seasons (Figure 3). Bottom temperatures tended to rise during the day in the wet season but stayed more constant and cooler in the dry season (Figure 2). Although these temperature dynamics differed by season, mean pond temperatures estimated from the diel samples taken twice monthly at top, midwater, and bottom were almost identical for the wet (21.06 SE=0.19) and dry season (21.08 SE=0.10) experiments (W1 and D2). However, the lowest and highest means occurred during the wet season, with lows apparently correlated with extended storm events (Figure 4).

Water quality parameters

Water quality parameters listed in Table 1 typically were significantly different among input rates of 125, 250, and 500 kg/ha/week of chicken litter. Means of temperature, secchi disk visibility, dissolved oxygen, and NH₄-N were not significantly different between treatments.

Dissolved oxygen was lower during D2 than W1. This difference is demonstrated for the high (500 kg/ha/wk) input rate and pond bottom DO measurements in Figure 5. Hardness and alkalinity were higher during the wet season but chlorophyll *a*, and N and P concentrations in the pond water were higher for the dry season (Table 1). Manures added during the wet season experiment were higher in N, P, and organic carbon than those added during the dry season. For example, manure added during W1 was 1.1% nitrogen (dry weight) whereas that added during D2 was only 0.3% nitrogen.

Tilapia production

Fish grew slowly during the wet season, doubling their size over five months at the 500 kg/ha/wk fertilizer input rate (Table 2). At the low input rate significant growth

ended after about the first two months of the experiment (Figure 6). For both W1 and D2, mean fish size was significantly different between high and low input rates but not between either of these and the intermediate (250 kg/ha/wk) input rate (Table 2).

Fish grew twice as fast during D2 than W1, with a resulting extrapolated net production for the high input of 968 kg/ha/yr for W1 and 2590 kg/ha/yr for D2 (Table 3). Even when fish production for each season was compared in relation to total nitrogen (or carbon or phosphorus) input, more fish were produced per unit of input in D2 than in W1 (Figure 7). Only a small portion of the greater production of D2 was due to the additional 100 fingerlings stocked in D2; most was due to the approximate doubling of the growth rate over that of W1.

Plankton

Plankton were sampled only during D2. The Cyanophyceae (blue-green algae) were most abundant comprising 45% of total phytoplankton abundance (Figure 8). Bacillariophyceae (diatoms) and Chlorophyceae (green algae) were also important, usually comprising about 10-20% of the sample. Analysis of tilapia stomach contents indicated that diatoms, green algae, and euglenoids were preferentially selected, because of their greater relative abundance in the stomach than in the water. Blue-green algae, however, by virtue of their greater density in pond water, still accounted for 32% of stomach contents (Harwanimbaga, 1987).

The composition of phytoplankton by genera was not found to be different for ponds receiving different inputs.

Rotifers were the most abundant group of the zooplankton (Figure 9). Zooplankton abundance peaked about three months after the start of D2, whereas phytoplankton abundance appeared to increase throughout the sample period.

DISCUSSION

Tilapia production was highly correlated with chlorophyll *a* concentrations when data for both seasons were combined (Figure 10). Algae were shown to be the major component of fish stomach contents, corroborating the energetic basis of this relationship.

Tilapia production increased with increasing input rates. However, bottom dissolved oxygen concentrations at the 500 kg/ha/wk input rate for D2 were approaching levels where reduced consumption, conversion efficiency and survival may begin. This indicates that further increases in organic fertilization may not be beneficial in this cool environment.

Higher levels of chlorophyll and fish production occurred in D2 than in W1. The reasons for this are not simple. Mean temperature and light levels were nearly identical for both seasons. Pond temperature stratification differed by season; however, D2 had cooler, more stable bottom temperatures and higher daily top temperatures. In addition, mixing occurred about four hours later in the morning during D2 than W1. These dry season conditions may have provided more time at acceptable temperatures for tilapia activity and other aspects of pond dynamics.

In earlier experiments at the Rwasave Station, Hanson et al. (1989) concluded that differences in productive capacities in individual ponds can be persistent, carrying over to subsequent experiments. This effect may be exaggerated for newer ponds with more exposed, reactive soils. Additionally, ponds in the dry season experiment may have received nutrients carried over from the wet season experiments. To support this hypothesis, some relationship should exist between soil characteristics and pond performance. For these two experiments, tilapia production was roughly related to soil nitrogen concentration with $R^2 = 44.6\%$. Primary productivity was more closely related to soil nitrogen with $R^2 = 56.3\%$ (Figure 11).

LITERATURE CITED

- Egna, H.S., N. Brown, and M. Leslie, 1987. Pond Dynamics/Aquaculture Collaborative Research Data Reports. Volume One: General reference. Site descriptions, materials and methods for the global experiment. Pond Dynamics/Aquaculture Collaborative Research Support Program. Office of International Research and Development, Oregon State University, Corvallis, Oregon. 84 p.
- Hanson, B., V. Ndoreyaho, R. Tubb, F. Rwangano, and W. Seim. 1989. Pond Dynamics/Aquaculture Collaborative Research Data Reports, Volume Five, Number One. Rwanda: Cycle I of the global experiment. Pond Dynamics/Aquaculture Collaborative Research Support Program. Office of International Research and Development, Oregon State University, Corvallis, Oregon. 62 p.
- Hanson, B., J. Moehl, Jr., K. Veverica, F. Rwangano, and M. Van Speybroeck. 1988. Pond culture of tilapia in Rwanda, a high altitude equatorial African country. Pages 553-559 *in* R.S.V. Pullin, T. Bhukaswan, K. Tonguthai, and J. L. Maclean, editors. The Second International Symposium on Tilapia in Aquaculture. ICLARM Conference Proceedings 15. Department of Fisheries, Bangkok, Thailand, and International Center for Living Aquatic Resources Management, Manila, Philippines. 623 p.
- Harwanimbago, C. 1987. A preliminary study of the plankton population in fish ponds at Rwasave (Butare, Rwanda). Thesis for the License en Sciences. Université Nationale du Rwanda, Butare, Rwanda.
- Hishamunda, N., and J. Moehl, Jr. 1989. Rwanda national fish culture project. Research and Development Series No. 34. International Center for Aquaculture, Alabama Agricultural Experiment Station. Auburn University, Alabama. 17 p.
- Ott, Lyman. 1977. An introduction to statistical methods and data analysis. Duxbury Press, Massachusetts. 730 p.
- Statgraphics. 1986. Statistical Graphics System, Version 4.0. STSC Inc. and Statistical Graphics Corp. Rockville, Maryland.

Table 1. Means of water quality parameters for the wet and dry season experiments of CRSP Cycle III research at Rwasave, Rwanda.

Variable ¹	Input rate (kg dry wt/ha/week)		
	125	250	500
Wet season			
Total hardness	85.24 A ²	82.56 A	74.54 B
Total alkalinity	57.22 A	53.92 AB	51.22 B
pH	7.51 A	7.53 A	7.67 B
Chlorophyll <i>a</i> (mg/m ³)	20.56 A	29.67 B	44.54 C
Total phosphorus	0.13 A	0.18 B	0.30 C
Soluble ortho-PO ₄	0.008 A	0.013 B	0.026 C
NO ₃ -N	0.05 A	0.06 B	0.08 C
Kjeldahl-N	1.21 A	1.76 AB	2.30 B
Dry season			
Total hardness	67.52 A	66.29 A	69.86 A
Total alkalinity	33.98 AB	32.32 A	34.83 B
pH	7.30 A	7.18 A	7.75 B
Chlorophyll <i>a</i> (mg/m ³)	51.62 A	72.24 B	127.89 C
Total phosphorus	0.19 A	0.29 B	0.51 C
Soluble ortho-PO ₄	0.03 A	0.05 A	0.12 B
NO ₃ -N	0.17 A	0.18 AB	0.20 B
Kjeldahl-N	2.22 A	3.02 B	3.48 B

¹All expressed as mg/L except pH and chlorophyll *a*.

²A,B,C: Duncan grouping of treatments. Means with the same letter are not significantly different (compare across input treatments only)(P>0.05).

Table 2. Mean fish weight through time during the wet and dry season experiments of CRSP Cycle III research at Rwasave, Rwanda.

Input rate (kg/ha/wk)	Month	Mean weight			
		Wet season (g ± SE)	Dry season (g ± SE)		
125	0	37.33 ± 0.67	A*	43.33 ± 0.88	D
	1	48.33 ± 2.85		56.00 ± 6.11	
	2	53.00 ± 3.21		69.67 ± 8.29	
	3	54.33 ± 2.60		86.67 ± 4.98	
	4	56.67 ± 4.91		95.67 ± 7.62	
	5	57.00 ± 5.29		99.33 ± 6.89	
	Harvest	53.67 ± 4.33	B	95.34	E
250	0	39.67 ± 0.67	A	44.33 ± 2.03	AD
	1	52.33 ± 2.03		59.00 ± 1.00	
	2	62.67 ± 0.88		79.00 ± 5.69	
	3	57.33 ± 6.49		104.00 ± 3.61	
	4	68.00 ± 1.00		132.00 ± 2.65	
	5	73.33 ± 3.28		132.33 ± 4.91	
	Harvest	70.00 ± 3.46	BC	127.61	EF
500	0	42.67 ± 2.33	A	46.00 ± 1.15	AD
	1	57.00 ± 2.00		64.33 ± 8.37	
	2	40.67 ± 3.00		94.00 ± 13.08	
	3	64.00 ± 4.63		126.67 ± 8.01	
	4	75.67 ± 4.84		163.33 ± 4.26	
	5	93.00 ± 7.81		173.33 ± 13.04	
	Harvest	87.67 ± 6.69	C	161.43	F

*A,B,C,D,E,F: Duncan grouping of treatments. Means with the same letter are not significantly different.

Table 3. Summary of tilapia stocking and harvest data for the wet and dry season CRSP Cycle III experiments at Rwasave, Rwanda.

Input level (kg/ha/wk)	Variable	Wet season		Dry season	
		Mean	SD	Mean	SD
125	Initial stocking rate	500		600	
	Initial mean weight (g)	37	14	43	14
	Final mean weight (g)	54	9	95	19
	Reproduction number*	333 (2.7)		104 (3.5)	
	Survival (%)	93		87.4	
	Net production (kg/ha/yr)	377.30		1,243.72	
250	Initial mean weight (g)	40	17	44	13
	Final mean weight (g)	70	9	127	21
	Reproduction number*	479 (2.2)		365 (3.9)	
	Survival (%)	93		90	
	Net production (kg/ha/yr)	668.6		1917.2	
	500	Initial mean weight (g)	43	13	46
Final mean weight (g)		88	11	161.5	25
Reproduction number*		655 (2.3)		13 (8.2)	
Survival (%)		94.6		88.4	
Net production (kg/ha/yr)		967.7		2590.0	

*Number in parentheses is the average weight (g).

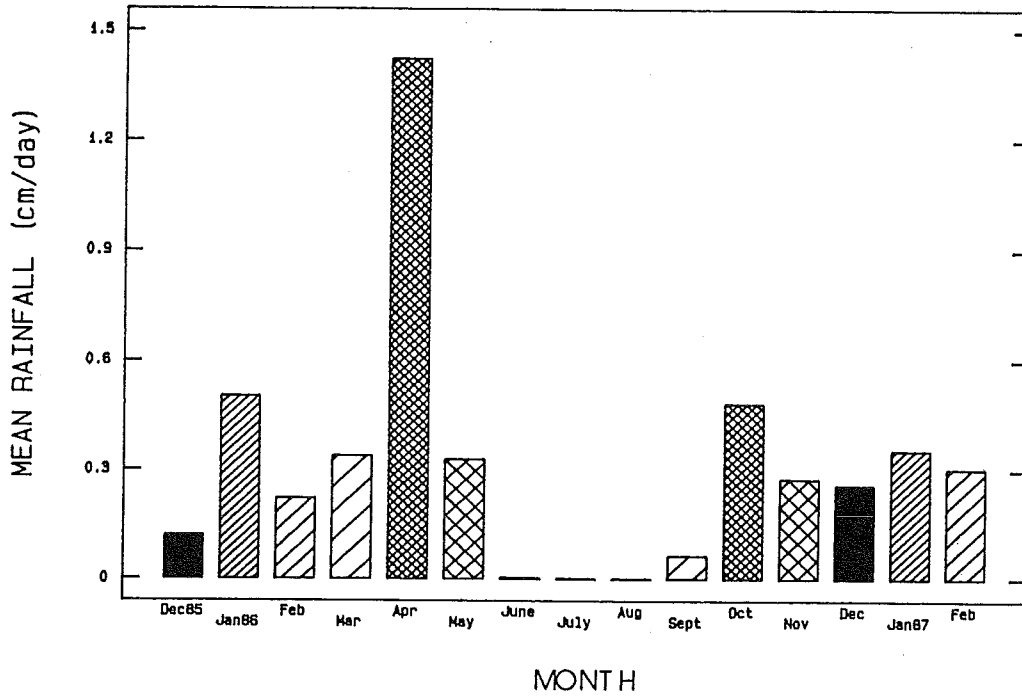


Figure 1. Mean rainfall (cm/d) at the Rwasave Fish Culture Station, Butare, Rwanda.

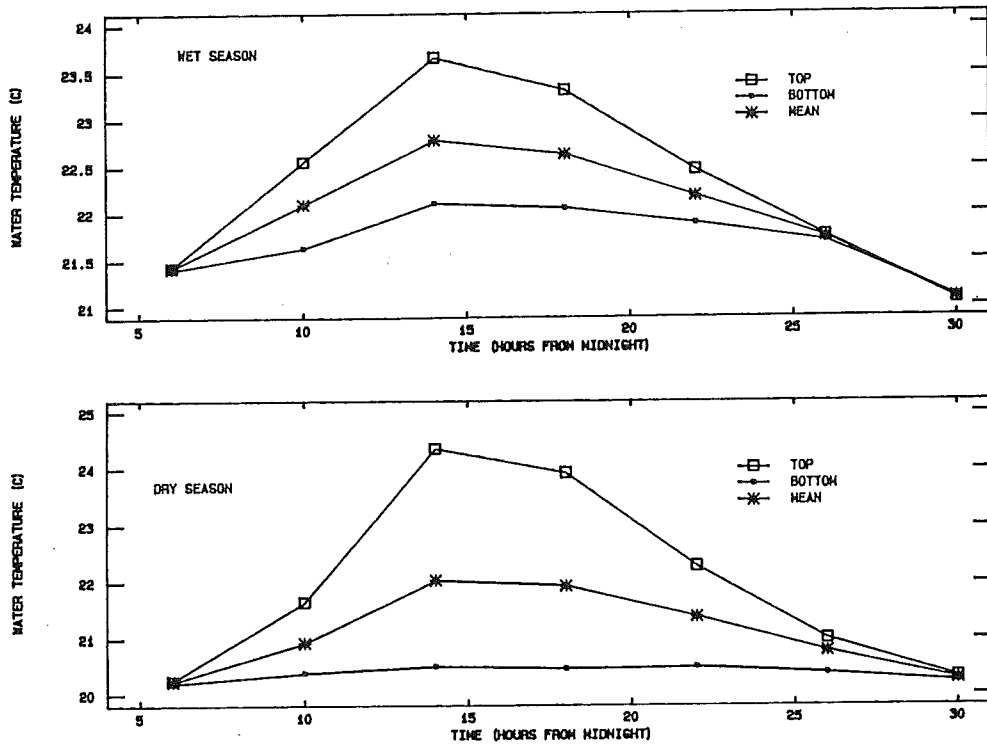


Figure 2. Top, bottom, and mean pond temperatures from diel samples for experiments W1 and D2.

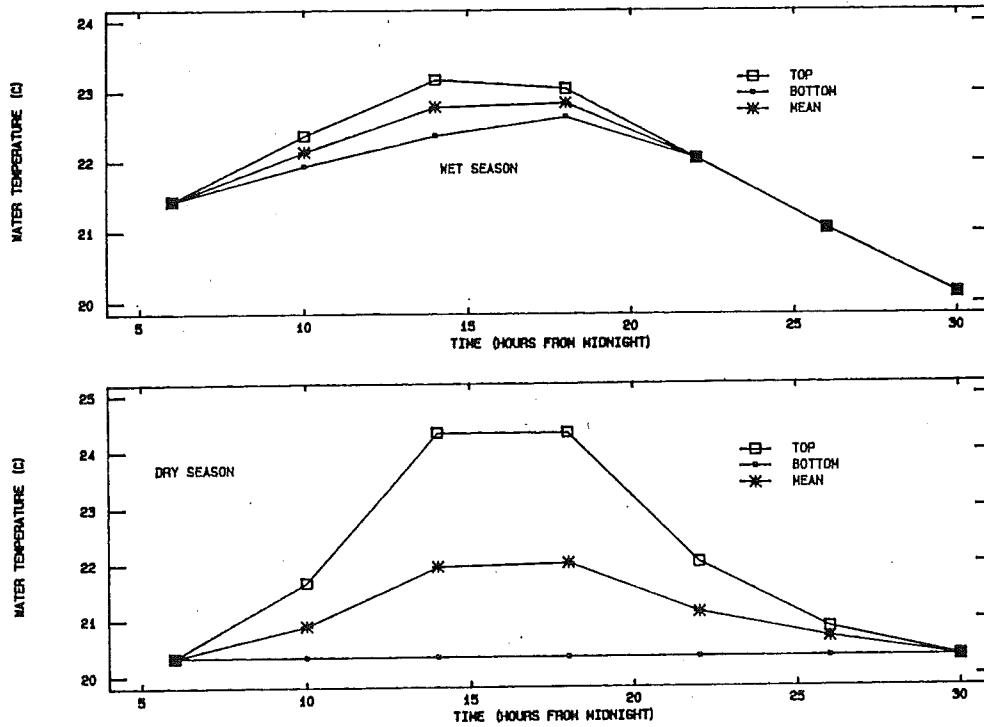


Figure 3. Top, bottom, and mean pond temperatures for the first 24-hour diel samples for both W1 and D2.

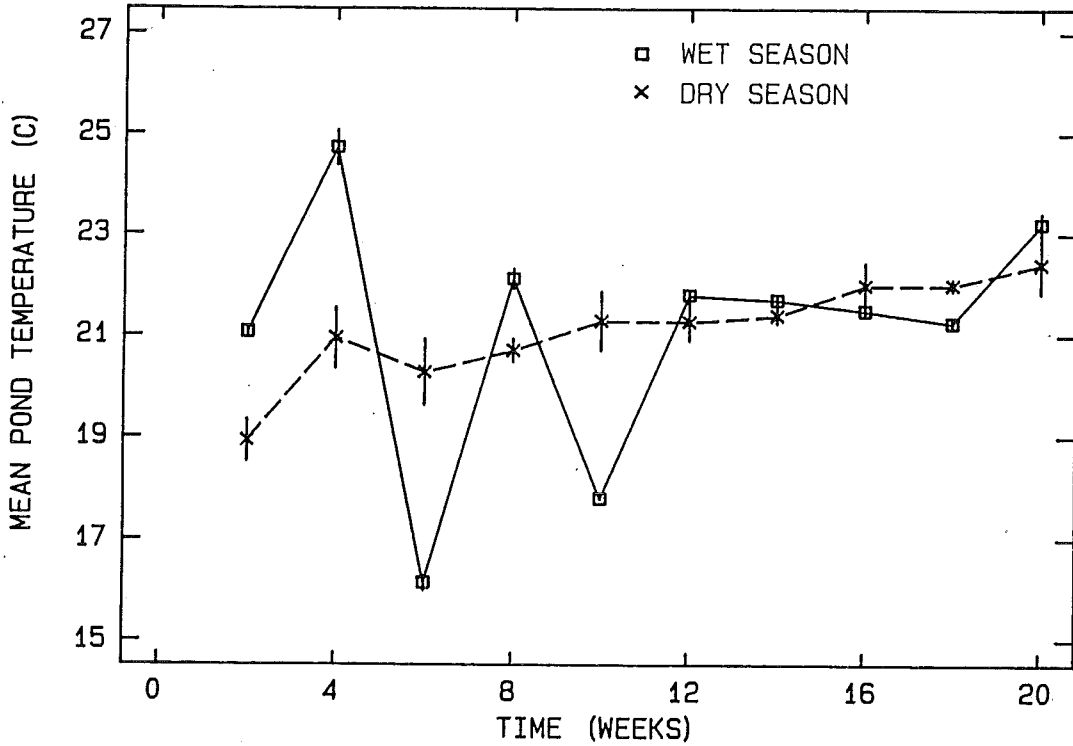


Figure 4. Mean temperatures for a selected treatment (250 kg/ha/wk input rate) for wet and dry seasons.

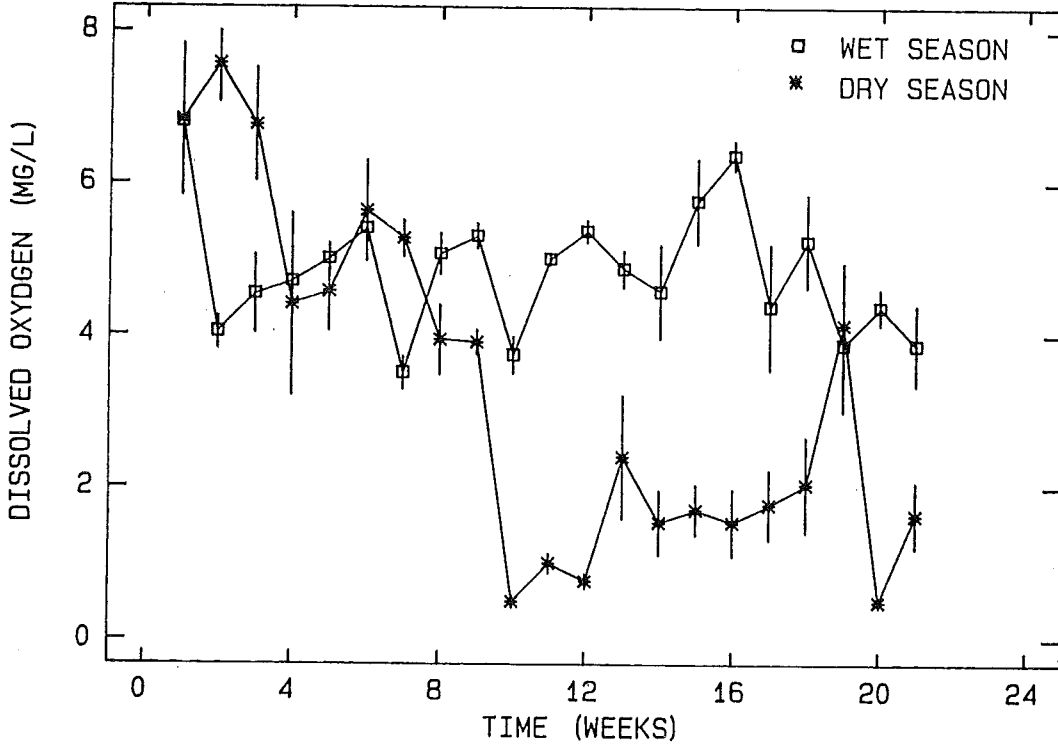


Figure 5. Dissolved oxygen concentrations (mg/L) for the bottom of ponds receiving the high input rate (500 kg/ha/wk).

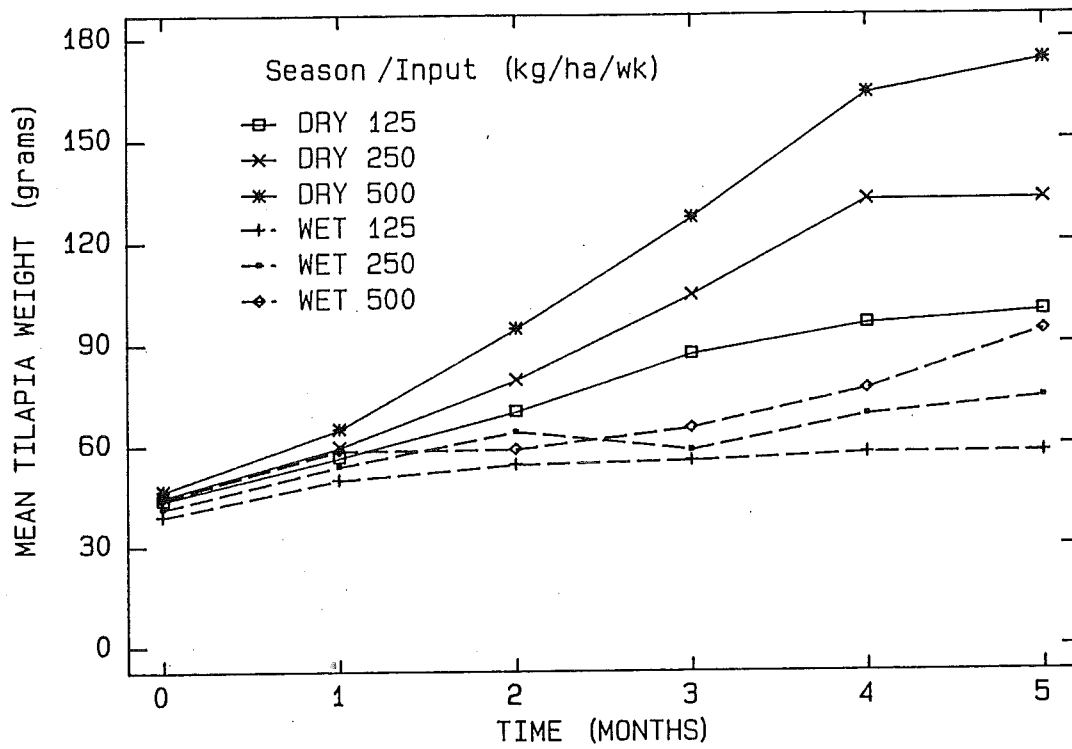


Figure 6. Mean fish weight through time for wet and dry seasons.

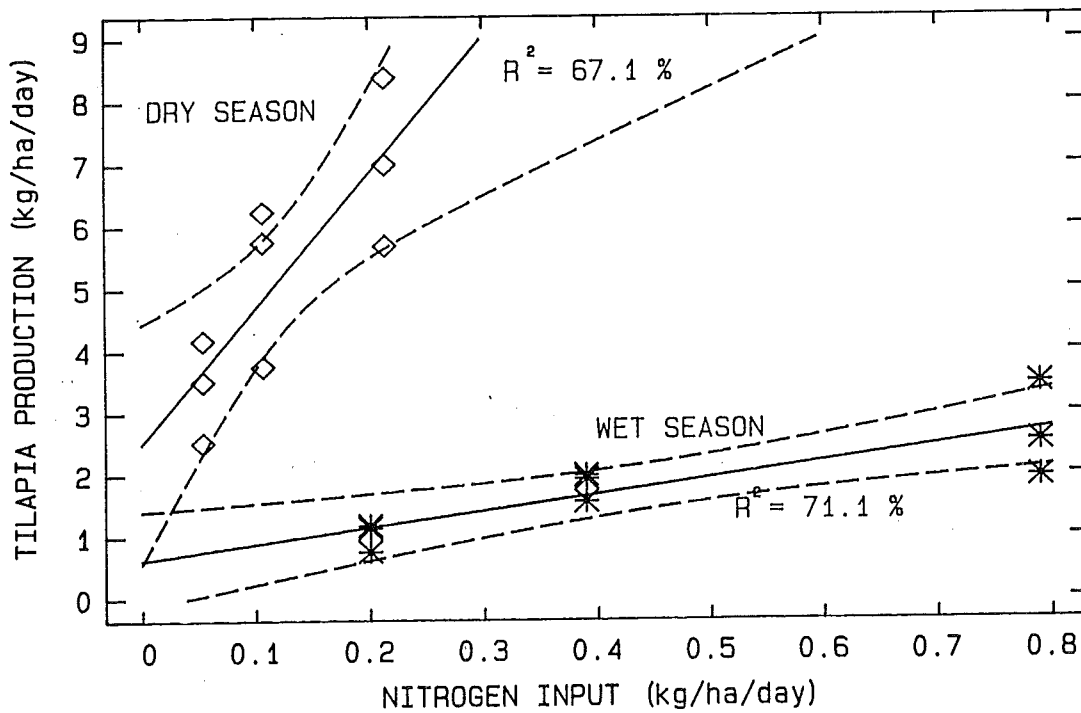


Figure 7. Nitrogen input versus tilapia production for wet and dry seasons.

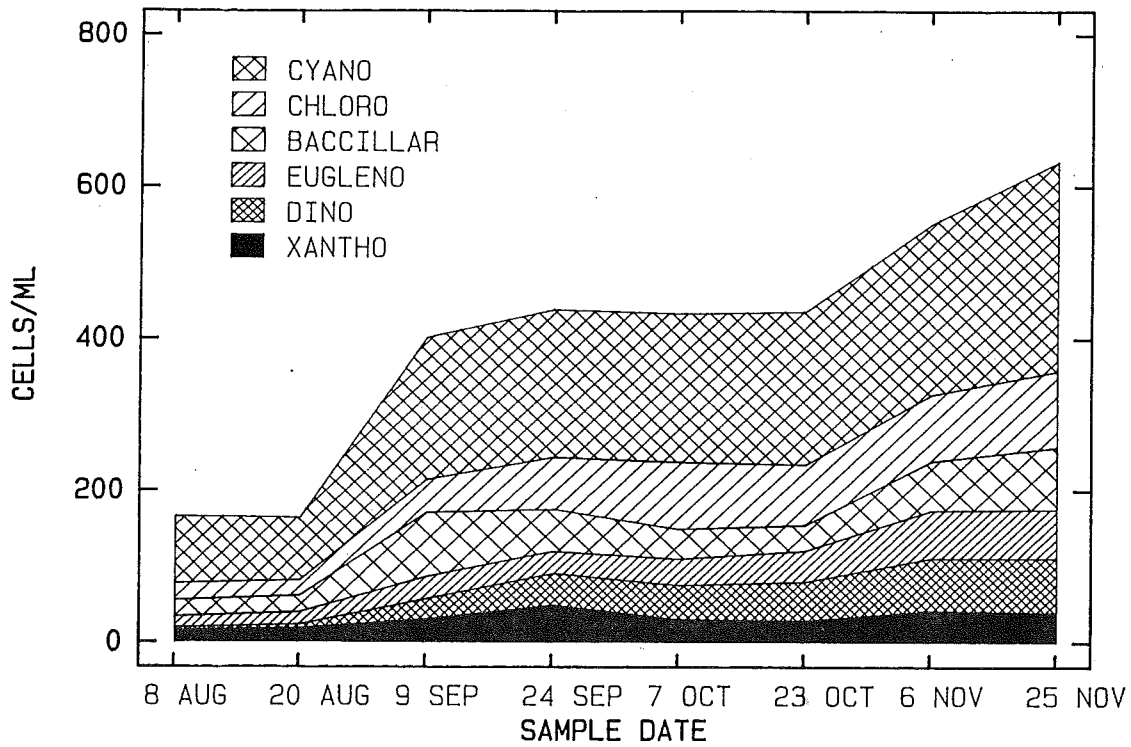


Figure 8. Phytoplankton cell counts for all ponds during the dry season and the early part of the "small wet season."

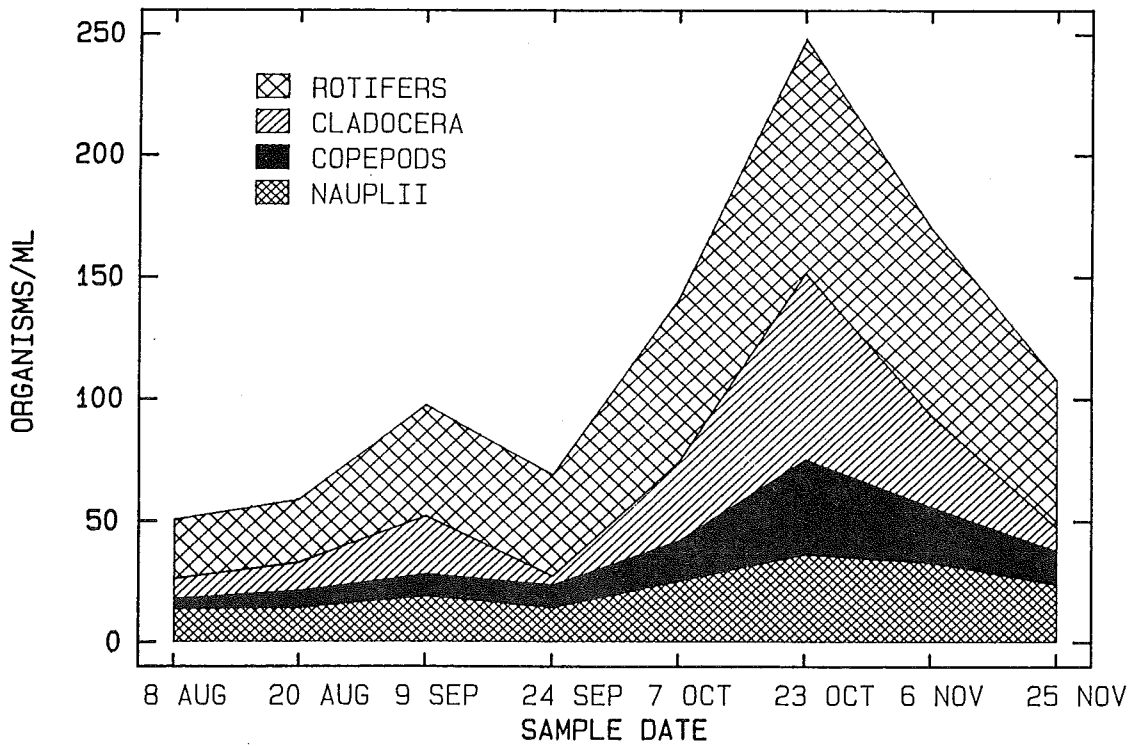


Figure 9. Zooplankton population densities for all ponds during the dry season and the early part of the "small wet season."

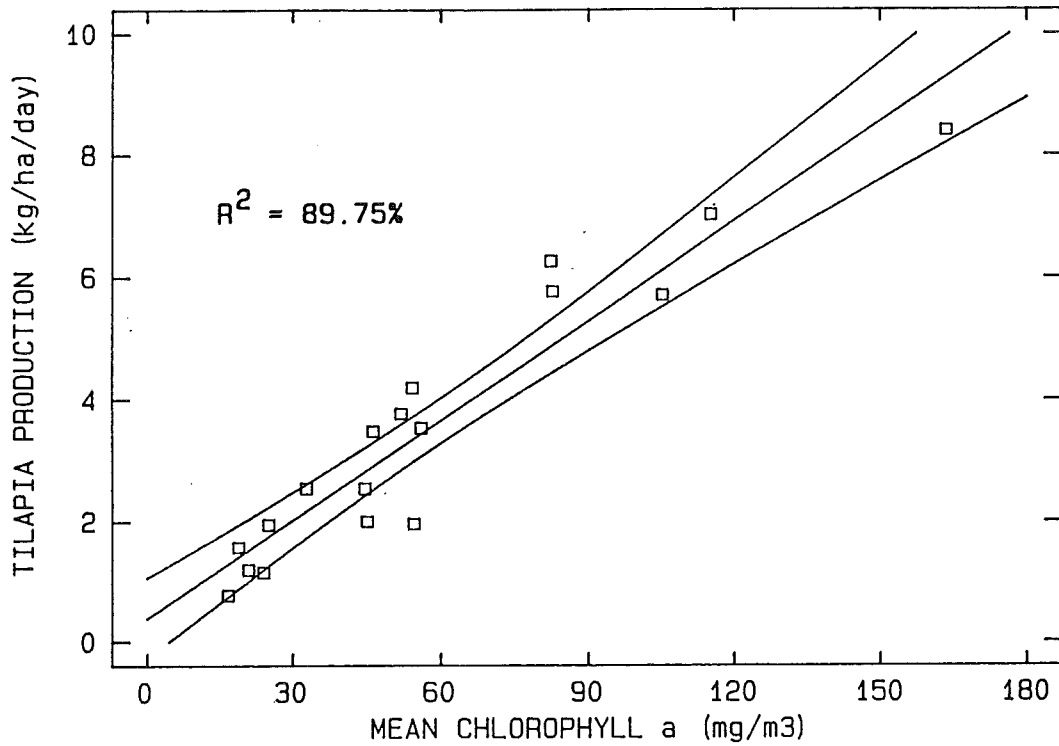


Figure 10. Tilapia production versus mean chlorophyll *a* for combined data from W1 and D2.

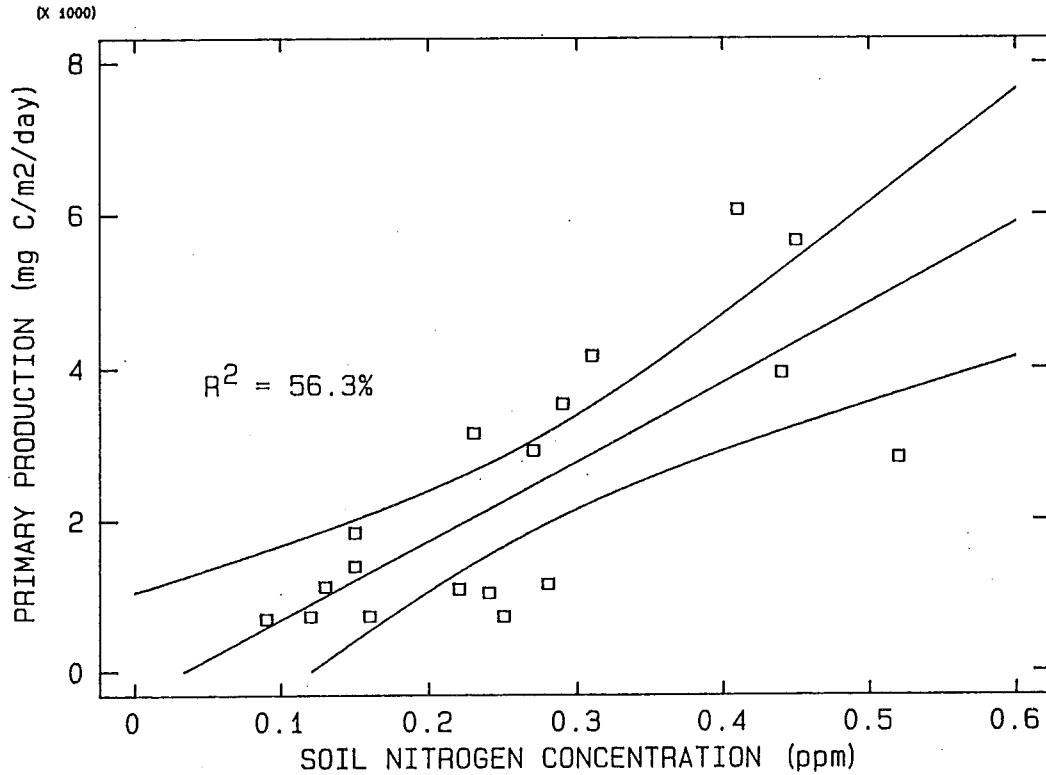


Figure 11. Primary production versus soil nitrogen for experiments W1 and D2.

APPENDIX

Complete Set of Data from Cycle III of the Pond Dynamics/ Aquaculture CRSP in Butare, Rwanda

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Units of Measurement and Abbreviations Used in the Appendix Tables

Daily Weather Measurements:

SOLAR1 (solar radiation)	E/m ² /d
SOLAR2 (solar radiation)	cal/cm ² /d
RAIN (rainfall)	cm/d
WIND (wind speed)	km/hr
ATEMPMAX (max air temperature)	°C
ATEMPMIN (min air temperature)	°C
EVAP (evaporation)	mm/d

Daily Pond Measurements:

DEPTH	m
INFLOW	m ³ /hr
OVERFLOW	Y/N
"nil"	<i>Oreochromis niloticus</i>

Weekly and Twice-Weekly Measurements:

All DO (dissolved oxygen)	mg/L
All TEMP (temperature)	°C
ALKA (alkalinity)	mg/L (as CaCO ₃)
HARD (total hardness)	mg/L (as CaCO ₃)
All N (Kjeldahl, NH ₃ , NO ₂ , NO ₃ , Total)	mg/L
All P (Total, Ortho-PO ₄)	mg/L
SECCHI DISK	cm
CHLOROPHYLL <i>a</i> , <i>b</i> , or <i>c</i>	mg/m ³

Diurnal Measurements:

All DO (dissolved oxygen)	mg/L
All TEMP (temperature)	°C

Fish/Shrimp Stocking, Sampling, and Harvesting:

"STK"	stocking
"SAM"	sampling
"HAR"	harvesting
"nil"	<i>Oreochromis niloticus</i>
POP. WEIGHT	kg
SAMPLE WEIGHT	g
SAMPLE LENGTH	cm
REPROD. WEIGHT	kg

Plankton and Benthos:

NET (PRIMARY) PRODUCTION	mg C/m ³ /d
GROSS (PRIMARY) PRODUCTION	mg C/m ³ /d
1	"rare"
2	"common"
3	"abundant"

Water Quality Characteristics:

ALKALIN (alkalinity).....	mg/L (as CaCO ₃)
HARDNESS.....	mg/L (as CaCO ₃)
All N (NH ₃ , NO ₂ , NO ₃ , NO ₂ +NO ₃)	mg/L
All P (Total, Ortho-P).....	mg/L
Cl ⁻	mg/L
SALT	ppt
SO ₄	mg/L
BORON.....	mg/L
CALCIUM.....	mg/L
COPPER.....	mg/L
IRON.....	mg/L
MAGNESIUM.....	mg/L
POTASSIUM.....	mg/L
SODIUM.....	mg/L
ZINC.....	mg/L

Pond Soil Characteristics:

CLAY	%
SILT.....	%
SAND	%
ORGANIC MATTER.....	%
SOIL-P.....	ppm
SOIL Ca.....	meq/100g
SOIL Mg.....	meq/100g
SOIL K.....	ppm
SOIL Na	meq/100g
SOIL N	%
SOIL NH ₄	ppm
SOIL NO ₃	ppm
SOIL CEC.....	meq/100g
SOIL SALT.....	mmhos/cm
SOIL Al.....	ppm
SOIL Fe.....	ppm
SOIL Zn	ppm
SOIL Mn	ppm
SOIL Cu.....	ppm
SOIL SO ₄	ppm
EXCH H.....	meq/100g

Pond Morphometrics:

AREA.....	m ²
VOLUME.....	m ³

Analysis of Nutrients and Lime:

All NUTRIENTS.....	% (dry matter basis)
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Nutrient and Lime Inputs:

All QUANTITIES	kg/ha
TSP.....	"triple superphosphate"
"cac"	CaCO ₃

Table 1. Daily Weather Measurements. Rwanda, Cycle III

DAY	MONTH	YEAR	SOLAR1	SOLAR2	RAIN	WIND	ATEMPMAX	ATEMPMIN	EVAP
22	12	1985	26.52		0.	1.	30.	15.	
23	12	1985	39.83		0.	1.	28.	10.	
24	12	1985	43.46		0.	2.	31.	10.	
25	12	1985	38.65		0.	2.	31.	12.	
26	12	1985	40.73		0.	2.	30.	12.	
27	12	1985	40.12		0.	2.	33.	12.	
28	12	1985	38.99		0.3	1.	32.	12.	
29	12	1985	43.25		0.	1.	30.	11.	
30	12	1985	29.04		0.9	1.	33.	15.	
31	12	1985	29.78		0.	1.	29.	12.	
1	1	1986	11.87		2.7	1.	30.	12.	
2	1	1986	21.84		6.2	1.	31.	12.	
3	1	1986	33.98		0.	2.	27.	11.	
4	1	1986	43.68		0.6	2.	31.	12.	
5	1	1986	45.01		0.2	2.	31.	12.	
6	1	1986	29.39		0.8	2.	31.	14.	
7	1	1986	39.19		0.	2.	28.	11.	
8	1	1986	33.09		0.	2.	31.	12.	
9	1	1986	36.28		0.7	2.	30.6	14.	
10	1	1986	38.95		0.	1.	30.5	12.	
11	1	1986	29.85		0.	1.	31.1	12.	
12	1	1986	21.63		0.	1.	30.3	15.3	
13	1	1986	40.17		0.	1.	29.6	14.6	
14	1	1986	29.13		0.1	1.	32.3	15.3	
15	1	1986	34.31		0.4	1.	31.3	15.3	
16	1	1986	37.91		1.3	1.	31.6	14.3	
17	1	1986	39.53		0.	1.	32.3	14.6	3.
18	1	1986	16.91		0.	1.	34.3	12.6	3.
19	1	1986	30.18		0.	1.	27.3	13.6	3.
20	1	1986	27.89		0.	1.	31.3	13.6	3.
21	1	1986	26.93		0.	1.	28.	12.3	3.
22	1	1986	21.39		0.	1.	30.6	12.6	3.
23	1	1986	23.07		0.7	1.	27.3	11.6	3.
24	1	1986	31.32		0.4	1.	26.6	10.6	3.
25	1	1986	39.03		0.	2.	30.3	11.	3.
26	1	1986	43.75		0.	1.	31.3	9.6	3.
27	1	1986	36.43		0.	2.	33.6	10.6	3.
28	1	1986	30.		0.	2.	32.6	12.	3.
29	1	1986	32.81		1.4	2.	31.6	13.	3.
30	1	1986	30.14		0.	2.	32.	12.	3.
31	1	1986	29.7		0.1	2.	31.6	11.6	3.
1	2	1986	24.14		0.	2.	32.	15.3	3.
2	2	1986	35.13		0.	2.	32.6	15.	3.
3	2	1986	25.95		0.1	2.	32.3	15.	3.
4	2	1986	18.66		0.	1.	31.6	13.6	3.
5	2	1986	5.88		0.2	0.	32.	14.6	3.

Table 1. Daily Weather Measurements. Rwanda, Cycle III

DAY	MONTH	YEAR	SOLAR1	SOLAR2	RAIN	WIND	ATEMPMAX	ATEMPMIN	EVAP
6	2	1986	30.85		2.1	1.	18.3	14.3	3.
7	2	1986	32.15		0.	2.	31.	11.6	3.
8	2	1986	38.1		0.	2.	30.	10.	3.
9	2	1986	41.03		0.	2.	32.1	10.3	3.
10	2	1986	25.13		0.	2.	32.5	12.3	3.
11	2	1986	33.48		0.	1.	32.3	10.	3.
12	2	1986	34.79		0.	2.	30.6	9.6	3.
13	2	1986	35.84		1.3	3.	31.3	12.6	3.
14	2	1986	43.65		0.6	1.	32.	13.6	3.
15	2	1986	39.22		0.	1.	30.3	11.6	3.
16	2	1986	22.47		0.	2.	33.6	11.6	3.
17	2	1986	38.69		0.	2.	31.	9.6	3.
18	2	1986	30.59		0.	2.	33.	10.6	3.
19	2	1986	46.52		0.	2.	27.6	8.6	3.
20	2	1986	46.99		0.	2.	30.	8.6	3.
21	2	1986	24.56		0.	2.	33.3	11.	3.
22	2	1986	42.49		0.	2.	30.6	10.6	3.
23	2	1986	38.67		0.	2.	31.6	10.6	3.
24	2	1986	47.26		0.	2.	31.6	9.3	3.
25	2	1986	38.43		0.	2.	33.3	8.6	3.
26	2	1986	32.66		0.	2.	33.6	10.6	3.
27	2	1986	7.65		0.	1.	31.6	13.3	3.
28	2	1986	37.84		1.9	1.	25.	10.6	3.
1	3	1986	44.72		0.	2.	31.	9.6	3.
2	3	1986	29.18		0.	2.	32.	10.6	3.
3	3	1986	40.12		0.	3.	31.6	12.6	3.
4	3	1986	16.54		0.	2.	30.6	14.	0.
5	3	1986	23.84		2.2	2.	27.3	12.6	0.
6	3	1986	20.98		0.2	2.	26.6	11.6	0.
7	3	1986	26.19		1.5	1.	29.3	11.3	0.
8	3	1986	45.06		0.	2.	25.6	11.	1.
9	3	1986	17.91		0.	1.	31.3	11.3	1.
10	3	1986	30.32		0.3	1.	31.6	10.6	1.
11	3	1986	26.15		0.1	2.	28.3	12.3	1.
12	3	1986	43.		0.	2.	27.6	12.3	1.
13	3	1986	26.08		0.	1.	31.6	10.6	1.
14	3	1986	38.44		0.6	1.	30.6	8.	1.
15	3	1986	35.54		0.	2.	30.6	11.6	1.
16	3	1986	32.28		0.	2.	33.6	10.	1.
17	3	1986	32.76		0.6	2.	30.3	12.3	1.
18	3	1986	38.02		0.	2.	28.6	11.3	1.
19	3	1986	18.41		0.	1.	33.	11.3	1.
20	3	1986	31.9		1.2	1.	26.6	9.3	1.
21	3	1986	31.49		0.2	2.	31.3	9.6	1.
22	3	1986	33.97		0.	1.	27.6	12.6	1.
23	3	1986	22.58		0.6	1.	31.3	10.6	1.
24	3	1986	40.51		0.4	2.	27.3	10.6	1.

Table 1. Daily Weather Measurements. Rwanda, Cycle III

DAY	MONTH	YEAR	SOLAR1	SOLAR2	RAIN	WIND	ATEMPMAX	ATEMPMIN	EVAP
25	3	1986	47.55		0.	2.	31.6	9.6	1.
26	3	1986	20.14		0.	1.	32.3	11.3	1.
27	3	1986	24.96		0.7	2.	28.	12.6	1.
28	3	1986	41.49		1.3	2.	29.6	12.6	1.
29	3	1986	23.07		0.	1.	32.	10.6	1.
30	3	1986	27.08		0.1	2.	28.6	11.3	1.
31	3	1986	21.05		0.5	2.	27.6	14.	1.
1	4	1986	32.28		0.6	1.	28.	12.6	1.
2	4	1986	26.07		0.	1.	30.6	12.6	1.
3	4	1986	33.27		0.3	2.	28.6	12.6	1.
4	4	1986	21.5		2.3	1.	29.3	15.6	1.
5	4	1986	27.44		0.8	1.	28.6	13.	1.
6	4	1986	19.38		0.	2.	31.3	15.6	1.
7	4	1986	10.89		5.1	1.	28.6	14.6	1.
8	4	1986	32.4		2.6	1.	24.3	12.6	1.
9	4	1986	24.68		1.8	1.	31.	14.6	1.
10	4	1986	32.31		4.1	1.	29.	14.	1.
11	4	1986	29.78		0.	1.	29.6	12.6	0.
12	4	1986	27.74		1.5	2.	31.3	14.6	0.
13	4	1986	31.74		0.9	1.	28.	13.6	0.
14	4	1986	22.27		0.1	1.	29.6	13.6	0.
15	4	1986	16.21		2.3	1.	28.	13.6	0.
16	4	1986	36.28		0.5	1.	26.	11.6	0.
17	4	1986	28.79		0.	1.	31.3	12.6	0.
18	4	1986	42.81		0.2	2.	30.6	11.6	0.
19	4	1986	22.19		0.	2.	31.	15.	0.
20	4	1986	31.91		0.5	2.	29.6	13.	0.
21	4	1986	11.18		6.6	1.	30.3	15.6	0.
22	4	1986	19.31		0.9	1.	24.6	15.3	0.
23	4	1986	26.7		1.4	1.	25.3	12.6	0.
24	4	1986	27.64		0.5	1.	29.6	13.6	0.
25	4	1986	20.64		2.4	1.	30.3	13.6	0.
26	4	1986	10.29		0.2	1.	28.3	15.6	0.
27	4	1986	39.21		2.8	1.	23.3	14.3	0.
28	4	1986	24.33		1.3	0.	32.6	15.6	0.
29	4	1986	24.56		1.6	1.	29.3	12.6	3.
30	4	1986	35.81		1.4	1.	31.3	14.6	3.
1	5	1986	27.21		0.5	1.	29.6	15.3	3.
2	5	1986	29.7		1.3	1.	29.6	14.3	3.
3	5	1986	34.3		0.	1.	31.3	14.6	3.
4	5	1986	41.19		0.	2.	31.3	13.3	3.
5	5	1986			0.	2.	32.	14.	3.
6	5	1986			0.9	2.	30.6	13.6	3.
7	5	1986			0.	2.	29.3	12.6	3.
8	5	1986			0.	2.	31.	15.	3.
9	5	1986			0.6	1.	30.	14.6	3.
10	5	1986			1.5	2.	31.	13.6	3.

Table 1. Daily Weather Measurements. Rwanda, Cycle III

DAY	MONTH	YEAR	SOLAR1	SOLAR2	RAIN	WIND	ATEMPMAX	ATEMPMIN	EVAP
11	5	1986			0.9	2.	31.	14.	3.
12	5	1986			0.2	1.	31.3	11.3	3.
13	5	1986	38.82		0.	2.	30.6	10.6	3.
14	5	1986	18.98		0.8	1.	30.6	13.6	2.
15	5	1986	26.19		1.9	2.	27.6	13.6	2.
16	5	1986	28.11		0.	1.	30.6	13.6	2.
17	5	1986	33.08		0.	2.	31.3	13.6	2.
18	5	1986	30.13		0.	2.	29.3	13.3	2.
19	5	1986	29.43		0.	2.	27.6	13.	2.
20	5	1986	23.32		0.	2.	27.6	14.6	2.
21	5	1986	21.59		0.	2.	28.3	12.6	2.
22	5	1986	22.24		0.6	2.	28.	15.6	2.
23	5	1986	18.83		0.1	1.	29.	14.6	2.
24	5	1986	13.06		0.2	2.	25.6	13.6	2.
25	5	1986	26.85		0.4	2.	23.3	13.	2.
26	5	1986	28.34		0.2	2.	28.3	14.6	2.
27	5	1986	33.23		0.	2.	28.	13.	2.
28	5	1986	22.91		0.	2.	28.3	11.6	2.
29	5	1986	29.05		0.	2.	27.3	9.6	2.
30	5	1986	27.53		0.	2.	29.	10.6	2.
31	5	1986	30.75		0.1	2.	28.6	11.3	2.
1	6	1986	32.28		0.	3.	30.3	14.6	2.
2	6	1986	19.53		0.	2.	30.6	14.3	2.
3	6	1986	29.66		0.	2.	28.6	10.6	4.
4	6	1986	28.81		0.	2.	29.6	9.6	4.
5	6	1986	35.24		0.	2.	30.	9.6	4.
6	6	1986	19.8		0.1	2.	31.3	10.6	4.
7	6	1986	29.2		0.	2.	26.6	10.3	4.
8	6	1986	31.28		0.	2.	27.	10.3	4.
9	6	1986	31.93		0.	3.	27.	8.7	4.
10	6	1986	37.54		0.	3.	26.3	8.7	4.
11	6	1986	35.9		0.	2.	27.7	9.7	4.
12	6	1986	36.81		0.	2.	29.7	8.3	4.
13	6	1986	38.75		0.	2.	30.3	8.7	4.
14	6	1986	38.18		0.	3.	29.7	9.7	4.
15	6	1986	32.78		0.	2.	30.	9.3	4.
16	6	1986	10.46		0.	2.	31.	13.	4.
17	6	1986	12.76		0.	1.	22.	12.	4.
18	6	1986	28.49		0.	1.	24.3	12.3	4.
19	6	1986	31.58		0.	2.	29.	12.3	4.
20	6	1986	30.5		0.	3.	28.7	9.7	4.
21	6	1986	30.84		0.	3.	29.3	9.7	4.
22	6	1986	30.1		0.	2.	30.	10.7	4.
23	6	1986	26.88		0.	3.	31.	11.7	4.
24	6	1986	31.59		0.	3.	27.	14.	4.
25	6	1986	31.45		0.	3.	27.	12.	4.
26	6	1986	33.31		0.	3.	28.7	11.	4.

Table 1. Daily Weather Measurements. Rwanda, Cycle III

DAY	MONTH	YEAR	SOLAR1	SOLAR2	RAIN	WIND	ATEMPMAX	ATEMPMIN	EVAP
27	6	1986	35.11		0.	3.	29.7	11.7	4.
28	6	1986	35.54		0.	3.	30.	7.3	4.
29	6	1986	34.84		0.	3.	28.3	4.7	4.
30	6	1986	33.94		0.	2.	29.	5.7	4.

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
13	7	1986	C1	1.18	N	N		nil
13	7	1986	C4	1.3	N	N		nil
13	7	1986	C6	1.22	N	N		nil
13	7	1986	C9	1.28	N	N		nil
13	7	1986	D2	1.22	N	N		nil
13	7	1986	D4	1.18	N	N		nil
13	7	1986	D7	1.14	N	N		nil
13	7	1986	D8	1.26	N	N		nil
13	7	1986	D11	1.22	N	N		nil
14	7	1986	C1	1.16	N	N		nil
14	7	1986	C4	1.28	N	N		nil
14	7	1986	C6	1.2	N	N		nil
14	7	1986	C9	1.27	N	N		nil
14	7	1986	D2	1.2	N	N		nil
14	7	1986	D4	1.18	N	N		nil
14	7	1986	D7	1.13	N	N		nil
14	7	1986	D8	1.25	N	N		nil
14	7	1986	D11	1.2	N	N		nil
15	7	1986	C1	1.16	N	N		nil
15	7	1986	C4	1.26	N	N		nil
15	7	1986	C6	1.2	N	N		nil
15	7	1986	C9	1.26	N	N		nil
15	7	1986	D2	1.19	N	N		nil
15	7	1986	D4	1.28	Y	N		nil
15	7	1986	D7	1.28	Y	N		nil
15	7	1986	D8	1.25	N	N		nil
15	7	1986	D11	1.17	N	N		nil
16	7	1986	C1	1.15	N	N		nil
16	7	1986	C4	1.24	N	N		nil
16	7	1986	C6	1.18	N	N		nil
16	7	1986	C9	1.25	N	N		nil
16	7	1986	D2	1.18	N	N		nil
16	7	1986	D4	1.27	N	N		nil
16	7	1986	D7	1.26	N	N		nil
16	7	1986	D8	1.26	N	N		nil
16	7	1986	D11	1.16	N	N		nil
17	7	1986	C1	1.14	N	N		nil
17	7	1986	C4	1.23	N	N		nil
17	7	1986	C6	1.17	N	N		nil
17	7	1986	C9	1.23	N	N		nil
17	7	1986	D2	1.16	N	N		nil
17	7	1986	D4	1.22	N	N		nil
17	7	1986	D7	1.27	N	N		nil
17	7	1986	D8	1.26	N	N		nil
17	7	1986	D11	1.14	N	N		nil
18	7	1986	C1	1.12	N	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
18	7	1986	C4	1.22	N	N		nil
18	7	1986	C6	1.16	N	N		nil
18	7	1986	C9	1.22	N	N		nil
18	7	1986	D2	1.15	N	N		nil
18	7	1986	D4	1.22	N	N		nil
18	7	1986	D7	1.26	N	N		nil
18	7	1986	D8	1.26	N	N		nil
18	7	1986	D11	1.14	N	N		nil
19	7	1986	C1	1.11	N	N		nil
19	7	1986	C4	1.2	N	N		nil
19	7	1986	C6	1.16	N	N		nil
19	7	1986	C9	1.21	N	N		nil
19	7	1986	D2	1.13	N	N		nil
19	7	1986	D4	1.21	N	N		nil
19	7	1986	D7	1.25	N	N		nil
19	7	1986	D8	1.26	N	N		nil
19	7	1986	D11	1.12	N	N		nil
20	7	1986	C1	1.29	Y	N		nil
20	7	1986	C4	1.18	N	N		nil
20	7	1986	C6	1.14	N	N		nil
20	7	1986	C9	1.2	N	N		nil
20	7	1986	D2	1.13	N	N		nil
20	7	1986	D4	1.21	N	N		nil
20	7	1986	D7	1.25	N	N		nil
20	7	1986	D8	1.26	N	N		nil
20	7	1986	D11	1.29	Y	N		nil
21	7	1986	C1	1.26	N	N		nil
21	7	1986	C4	1.17	N	N		nil
21	7	1986	C6	1.28	Y	N		nil
21	7	1986	C9	1.19	N	N		nil
21	7	1986	D2	1.25	Y	N		nil
21	7	1986	D4	1.21	N	N		nil
21	7	1986	D7	1.24	N	N		nil
21	7	1986	D8	1.26	N	N		nil
21	7	1986	D11	1.26	N	N		nil
22	7	1986	C1	1.25	N	N		nil
22	7	1986	C4	1.16	N	N		nil
22	7	1986	C6	1.25	N	N		nil
22	7	1986	C9	1.18	N	N		nil
22	7	1986	D2	1.23	N	N		nil
22	7	1986	D4	1.21	N	N		nil
22	7	1986	D7	1.23	N	N		nil
22	7	1986	D8	1.26	N	N		nil
22	7	1986	D11	1.23	N	N		nil
23	7	1986	C1	1.24	N	N		nil
23	7	1986	C4	1.14	N	N		nil
23	7	1986	C6	1.24	N	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
23	7	1986	C9	1.29	Y	N		nil
23	7	1986	D2	1.21	N	N		nil
23	7	1986	D4	1.2	N	N		nil
23	7	1986	D7	1.22	N	N		nil
23	7	1986	D8	1.26	N	N		nil
23	7	1986	D11	1.21	N	N		nil
24	7	1986	C1	1.19	N	N		nil
24	7	1986	C4	1.08	N	N		nil
24	7	1986	C6	1.2	N	N		nil
24	7	1986	C9	1.26	N	N		nil
24	7	1986	D2	1.2	N	N		nil
24	7	1986	D4	1.2	N	N		nil
24	7	1986	D7	1.2	N	N		nil
24	7	1986	D8	1.25	N	N		nil
24	7	1986	D11	1.19	N	N		nil
25	7	1986	C1	1.14	N	N		nil
25	7	1986	C4	1.24	Y	N		nil
25	7	1986	C6	1.17	N	N		nil
25	7	1986	C9	1.24	N	N		nil
25	7	1986	D2	1.16	N	N		nil
25	7	1986	D4	1.17	N	N		nil
25	7	1986	D7	1.18	N	N		nil
25	7	1986	D8	1.24	N	N		nil
25	7	1986	D11	1.16	N	N		nil
26	7	1986	C1	1.09	N	N		nil
26	7	1986	C4	1.16	N	N		nil
26	7	1986	C6	1.12	N	N		nil
26	7	1986	C9	1.21	N	N		nil
26	7	1986	D2	1.14	N	N		nil
26	7	1986	D4	1.14	N	N		nil
26	7	1986	D7	1.16	N	N		nil
26	7	1986	D8	1.22	N	N		nil
26	7	1986	D11	1.12	N	N		nil
27	7	1986	C1	1.25	Y	N		nil
27	7	1986	C4	1.24	Y	N		nil
27	7	1986	C6	1.27	Y	N		nil
27	7	1986	C9	1.18	N	N		nil
27	7	1986	D2	1.26	Y	N		nil
27	7	1986	D4	1.12	N	N		nil
27	7	1986	D7	1.15	N	N		nil
27	7	1986	D8	1.2	N	N		nil
27	7	1986	D11	1.1	N	N		nil
28	7	1986	C1	1.18	N	N		nil
28	7	1986	C4	1.17	N	N		nil
28	7	1986	C6	1.24	N	N		nil
28	7	1986	C9	1.28	Y	N		nil
28	7	1986	D2	1.23	N	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
28	7	1986	D4	1.3	Y	N		nil
28	7	1986	D7	1.27	Y	N		nil
28	7	1986	D8	1.19	N	N		nil
28	7	1986	D11	1.27	Y	N		nil
29	7	1986	C1	1.14	N	N		nil
29	7	1986	C4	1.11	N	N		nil
29	7	1986	C6	1.21	N	N		nil
29	7	1986	C9	1.25	N	N		nil
29	7	1986	D2	1.2	N	N		nil
29	7	1986	D4	1.27	N	N		nil
29	7	1986	D7	1.25	N	N		nil
29	7	1986	D8	1.18	N	N		nil
29	7	1986	D11	1.23	N	N		nil
30	7	1986	C1	1.08	N	N		nil
30	7	1986	C4	1.04	N	N		nil
30	7	1986	C6	1.16	N	N		nil
30	7	1986	C9	1.22	N	N		nil
30	7	1986	D2	1.17	N	N		nil
30	7	1986	D4	1.22	N	N		nil
30	7	1986	D7	1.22	N	N		nil
30	7	1986	D8	1.16	N	N		nil
30	7	1986	D11	1.19	N	N		nil
31	7	1986	C1	1.04	N	N		nil
31	7	1986	C4	1.	N	N		nil
31	7	1986	C6	1.12	N	N		nil
31	7	1986	C9	1.19	N	N		nil
31	7	1986	D2	1.15	N	N		nil
31	7	1986	D4	1.2	N	N		nil
31	7	1986	D7	1.2	N	N		nil
31	7	1986	D8	1.14	N	N		nil
31	7	1986	D11	1.16	N	N		nil
1	8	1986	C1	1.	N	N		nil
1	8	1986	C4	1.24	Y	N		nil
1	8	1986	C6	1.26	Y	N		nil
1	8	1986	C9	1.26	Y	N		nil
1	8	1986	D2	1.25	Y	N		nil
1	8	1986	D4	1.17	N	N		nil
1	8	1986	D7	1.16	N	N		nil
1	8	1986	D8	1.13	N	N		nil
1	8	1986	D11	1.12	N	N		nil
2	8	1986	C1	1.26	Y	N		nil
2	8	1986	C4	1.17	N	N		nil
2	8	1986	C6	1.23	N	N		nil
2	8	1986	C9	1.23	N	N		nil
2	8	1986	D2	1.2	N	N		nil
2	8	1986	D4	1.15	N	N		nil
2	8	1986	D7	1.15	N	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
2	8	1986	D8	1.3	Y	N		nil
2	8	1986	D11	1.1	N	N		nil
3	8	1986	C1	1.21	N	N		nil
3	8	1986	C4	1.1	N	N		nil
3	8	1986	C6	1.19	N	N		nil
3	8	1986	C9	1.2	N	N		nil
3	8	1986	D2	1.18	N	N		nil
3	8	1986	D4	1.12	N	N		nil
3	8	1986	D7	1.28	Y	N		nil
3	8	1986	D8	1.28	N	N		nil
3	8	1986	D11	1.26	Y	N		nil
4	8	1986	C1	1.16	N	N		nil
4	8	1986	C4	1.24	Y	N		nil
4	8	1986	C6	1.16	N	N		nil
4	8	1986	C9	1.17	N	N		nil
4	8	1986	D2	1.14	N	N		nil
4	8	1986	D4	1.28	Y	N		nil
4	8	1986	D7	1.26	N	N		nil
4	8	1986	D8	1.26	N	N		nil
4	8	1986	D11	1.22	N	N		nil
5	8	1986	C1	1.11	N	N		nil
5	8	1986	C4	1.15	N	N		nil
5	8	1986	C6	1.12	N	N		nil
5	8	1986	C9	1.14	N	N		nil
5	8	1986	D2	1.12	N	N		nil
5	8	1986	D4	1.25	N	N		nil
5	8	1986	D7	1.23	N	N		nil
5	8	1986	D8	1.24	N	N		nil
5	8	1986	D11	1.18	N	N		nil
6	8	1986	C1	1.06	N	N		nil
6	8	1986	C4	1.08	N	N		nil
6	8	1986	C6	1.08	N	N		nil
6	8	1986	C9	1.12	N	N		nil
6	8	1986	D2	1.1	N	N		nil
6	8	1986	D4	1.22	N	N		nil
6	8	1986	D7	1.2	N	N		nil
6	8	1986	D8	1.22	N	N		nil
6	8	1986	D11	1.14	N	N		nil
7	8	1986	C1	1.02	N	N		nil
7	8	1986	C4	1.03	N	N		nil
7	8	1986	C6	1.05	N	N		nil
7	8	1986	C9	1.09	N	N		nil
7	8	1986	D2	1.07	N	N		nil
7	8	1986	D4	1.2	N	N		nil
7	8	1986	D7	1.3	Y	N		nil
7	8	1986	D8	1.2	N	N		nil
7	8	1986	D11	1.12	N	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
8	8	1986	C1	1.	N	N		nil
8	8	1986	C4	1.	N	N		nil
8	8	1986	C6	1.02	N	N	1	nil
8	8	1986	C9	1.28	Y	N		nil
8	8	1986	D2	1.27	Y	N		nil
8	8	1986	D4	1.17	N	N		nil
8	8	1986	D7	1.16	N	N		nil
8	8	1986	D8	1.18	N	N		nil
8	8	1986	D11	1.08	N	N		nil
9	8	1986	C1	0.95	N	N		nil
9	8	1986	C4	0.95	N	N		nil
9	8	1986	C6	1.	N	N		nil
9	8	1986	C9	1.25	N	N		nil
9	8	1986	D2	1.25	N	N		nil
9	8	1986	D4	1.14	N	N		nil
9	8	1986	D7	1.14	N	N		nil
9	8	1986	D8	1.15	N	N		nil
9	8	1986	D11	1.06	N	N		nil
10	8	1986	C1	1.24	Y	N		nil
10	8	1986	C4	1.27	Y	N		nil
10	8	1986	C6	1.27	Y	N		nil
10	8	1986	C9	1.23	Y	N		nil
10	8	1986	D2	1.22	Y	N		nil
10	8	1986	D4	1.3	Y	N		nil
10	8	1986	D7	1.28	Y	N		nil
10	8	1986	D8	1.27	Y	N		nil
10	8	1986	D11	1.28	Y	N		nil
11	8	1986	C1	1.19	N	N		nil
11	8	1986	C4	1.2	N	N		nil
11	8	1986	C6	1.23	N	N		nil
11	8	1986	C9	1.2	N	N		nil
11	8	1986	D2	1.19	N	N		nil
11	8	1986	D4	1.29	N	N		nil
11	8	1986	D7	1.25	N	N		nil
11	8	1986	D8	1.26	N	N		nil
11	8	1986	D11	1.23	N	N		nil
12	8	1986	C1	1.14	N	N		nil
12	8	1986	C4	1.12	N	N		nil
12	8	1986	C6	1.17	N	N		nil
12	8	1986	C9	1.16	N	N		nil
12	8	1986	D2	1.18	N	N		nil
12	8	1986	D4	1.25	N	N		nil
12	8	1986	D7	1.2	N	N		nil
12	8	1986	D8	1.24	N	N		nil
12	8	1986	D11	1.17	N	N		nil
13	8	1986	C1	1.11	N	N		nil
13	8	1986	C4	1.06	N	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
13	8	1986	C6	1.15	N	N		nil
13	8	1986	C9	1.14	N	N		nil
13	8	1986	D2	1.16	N	N		nil
13	8	1986	D4	1.24	N	N		nil
13	8	1986	D7	1.19	N	N		nil
13	8	1986	D8	1.23	N	N		nil
13	8	1986	D11	1.15	N	N		nil
14	8	1986	C1	1.3	Y	N		nil
14	8	1986	C4	1.28	Y	N		nil
14	8	1986	C6	1.28	Y	N		nil
14	8	1986	C9	1.1	N	N		nil
14	8	1986	D2	1.13	N	N		nil
14	8	1986	D4	1.18	N	N		nil
14	8	1986	D7	1.18	N	N		nil
14	8	1986	D8	1.2	N	N		nil
14	8	1986	D11	1.1	N	N		nil
15	8	1986	C1	1.27	N	N		nil
15	8	1986	C4	1.2	N	N		nil
15	8	1986	C6	1.32	Y	N		nil
15	8	1986	C9	1.26	Y	N		nil
15	8	1986	D2	1.1	N	N		nil
15	8	1986	D4	1.14	N	N		nil
15	8	1986	D7	1.13	N	N		nil
15	8	1986	D8	1.18	N	N		nil
15	8	1986	D11	1.24	Y	N		nil
16	8	1986	C1	1.22	N	N		nil
16	8	1986	C4	1.23	Y	N		nil
16	8	1986	C6	1.28	N	N		nil
16	8	1986	C9	1.23	N	N		nil
16	8	1986	D2	1.26	Y	N		nil
16	8	1986	D4	1.27	Y	N		nil
16	8	1986	D7	1.11	N	N		nil
16	8	1986	D8	1.16	N	N		nil
16	8	1986	D11	1.2	N	N		nil
17	8	1986	C1	1.16	N	N		nil
17	8	1986	C4	1.16	N	N		nil
17	8	1986	C6	1.24	N	N		nil
17	8	1986	C9	1.2	N	N		nil
17	8	1986	D2	1.23	N	N		nil
17	8	1986	D4	1.23	N	N		nil
17	8	1986	D7	1.27	Y	N		nil
17	8	1986	D8	1.3	Y	N		nil
17	8	1986	D11	1.27	Y	N		nil
18	8	1986	C1	1.25	Y	N		nil
18	8	1986	C4	1.25	Y	N		nil
18	8	1986	C6	1.2	N	N		nil
18	8	1986	C9	1.26	Y	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
18	8	1986	D2	1.2	N	N		nil
18	8	1986	D4	1.2	N	N		nil
18	8	1986	D7	1.24	N	N		nil
18	8	1986	D8	1.29	N	N		nil
18	8	1986	D11	1.22	N	N		nil
19	8	1986	C1	1.19	N	N		nil
19	8	1986	C4	1.18	N	N		nil
19	8	1986	C6	1.26	Y	N		nil
19	8	1986	C9	1.24	N	N		nil
19	8	1986	D2	1.17	N	N		nil
19	8	1986	D4	1.16	N	N		nil
19	8	1986	D7	1.21	N	N		nil
19	8	1986	D8	1.27	N	N		nil
19	8	1986	D11	1.17	N	N		nil
20	8	1986	C1	1.14	N	N		nil
20	8	1986	C4	1.11	N	N		nil
20	8	1986	C6	1.22	N	N		nil
20	8	1986	C9	1.2	N	N		nil
20	8	1986	D2	1.15	N	N		nil
20	8	1986	D4	1.14	N	N		nil
20	8	1986	D7	1.18	N	N		nil
20	8	1986	D8	1.25	N	N		nil
20	8	1986	D11	1.13	N	N		nil
21	8	1986	C1	1.09	N	N		nil
21	8	1986	C4	1.06	N	N		nil
21	8	1986	C6	1.18	N	N		nil
21	8	1986	C9	1.17	N	N		nil
21	8	1986	D2	1.12	N	N		nil
21	8	1986	D4	1.12	N	N		nil
21	8	1986	D7	1.16	N	N		nil
21	8	1986	D8	1.23	N	N		nil
21	8	1986	D11	1.1	N	N		nil
22	8	1986	C1	1.04	N	N		nil
22	8	1986	C4	1.01	N	N		nil
22	8	1986	C6	1.14	N	N		nil
22	8	1986	C9	1.14	N	N		nil
22	8	1986	D2	1.1	N	N		nil
22	8	1986	D4	1.09	N	N		nil
22	8	1986	D7	1.14	N	N		nil
22	8	1986	D8	1.22	N	N		nil
22	8	1986	D11	1.07	N	N		nil
23	8	1986	C1	1.	N	N		nil
23	8	1986	C4	0.94	N	N		nil
23	8	1986	C6	1.1	N	N		nil
23	8	1986	C9	1.11	N	N		nil
23	8	1986	D2	1.07	N	N		nil
23	8	1986	D4	1.09	N	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
23	8	1986	D7	1.11	N	N		nil
23	8	1986	D8	1.2	N	N		nil
23	8	1986	D11	1.04	N	N		nil
24	8	1986	C1	1.26	Y	N		nil
24	8	1986	C4	1.28	Y	N		nil
24	8	1986	C6	1.3	Y	N		nil
24	8	1986	C9	1.08	N	N		nil
24	8	1986	D2	1.05	N	N		nil
24	8	1986	D4	1.28	Y	N		nil
24	8	1986	D7	1.26	Y	N		nil
24	8	1986	D8	1.3	Y	N		nil
24	8	1986	D11	1.25	Y	N		nil
25	8	1986	C1	1.2	N	N		nil
25	8	1986	C4	1.2	N	N		nil
25	8	1986	C6	1.28	N	N		nil
25	8	1986	C9	1.27	Y	N		nil
25	8	1986	D2	1.28	Y	N		nil
25	8	1986	D4	1.25	N	N		nil
25	8	1986	D7	1.23	N	N		nil
25	8	1986	D8	1.27	N	N		nil
25	8	1986	D11	1.19	N	N		nil
26	8	1986	C1	1.14	N	N		nil
26	8	1986	C4	1.3	Y	N		nil
26	8	1986	C6	1.23	N	N		nil
26	8	1986	C9	1.24	N	N		nil
26	8	1986	D2	1.25	N	N		nil
26	8	1986	D4	1.21	N	N		nil
26	8	1986	D7	1.2	N	N		nil
26	8	1986	D8	1.25	N	N		nil
26	8	1986	D11	1.24	Y	N		nil
27	8	1986	C1	1.26	Y	N		nil
27	8	1986	C4	1.22	N	N		nil
27	8	1986	C6	1.19	N	N		nil
27	8	1986	C9	1.2	N	N		nil
27	8	1986	D2	1.21	N	N		nil
27	8	1986	D4	1.18	N	N		nil
27	8	1986	D7	1.17	N	N		nil
27	8	1986	D8	1.24	N	N		nil
27	8	1986	D11	1.18	N	N		nil
28	8	1986	C1	1.2	N	N		nil
28	8	1986	C4	1.15	N	N		nil
28	8	1986	C6	1.16	N	N		nil
28	8	1986	C9	1.16	N	N		nil
28	8	1986	D2	1.18	N	N		nil
28	8	1986	D4	1.15	N	N		nil
28	8	1986	D7	1.27	Y	N		nil
28	8	1986	D8	1.23	N	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
28	8	1986	D11	1.16	N	N		nil
29	8	1986	C1	1.16	N	N		nil
29	8	1986	C4	1.09	N	N		nil
29	8	1986	C6	1.14	N	N		nil
29	8	1986	C9	1.27	Y	N		nil
29	8	1986	D2	1.17	N	N		nil
29	8	1986	D4	1.14	N	N		nil
29	8	1986	D7	1.24	N	N		nil
29	8	1986	D8	1.23	N	N		nil
29	8	1986	D11	1.14	N	N		nil
30	8	1986	C1	1.14	N	N		nil
30	8	1986	C4	1.26	Y	N		nil
30	8	1986	C6	1.12	N	N		nil
30	8	1986	C9	1.26	N	N		nil
30	8	1986	D2	1.16	N	N		nil
30	8	1986	D4	1.14	N	N		nil
30	8	1986	D7	1.22	N	N		nil
30	8	1986	D8	1.23	N	N		nil
30	8	1986	D11	1.13	N	N		nil
31	8	1986	C1	1.14	N	N		nil
31	8	1986	C4	1.24	N	N		nil
31	8	1986	C6	1.12	N	N		nil
31	8	1986	C9	1.24	N	N		nil
31	8	1986	D2	1.15	N	N		nil
31	8	1986	D4	1.14	N	N		nil
31	8	1986	D7	1.21	N	N		nil
31	8	1986	D8	1.23	N	N		nil
31	8	1986	D11	1.13	N	N		nil
1	9	1986	C1	1.26	N	N		nil
1	9	1986	C4	1.23	N	N		nil
1	9	1986	C6	1.3	N	N		nil
1	9	1986	C9	1.22	N	N		nil
1	9	1986	D2	1.14	N	N		nil
1	9	1986	D4	1.16	N	N		nil
1	9	1986	D7	1.17	N	N		nil
1	9	1986	D8	1.22	N	N		nil
1	9	1986	D11	1.25	N	N		nil
2	9	1986	C1	1.24	Y	N		nil
2	9	1986	C4	1.22	N	N		nil
2	9	1986	C6	1.29	Y	N		nil
2	9	1986	C9	1.21	N	N		nil
2	9	1986	D2	1.26	N	N		nil
2	9	1986	D4	1.3	N	N		nil
2	9	1986	D7	1.15	N	N		nil
2	9	1986	D8	1.21	N	N		nil
2	9	1986	D11	1.22	N	N		nil
3	9	1986	C1	1.23	N	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
3	9	1986	C4	1.21	N	N		nil
3	9	1986	C6	1.27	N	N		nil
3	9	1986	C9	1.2	N	N		nil
3	9	1986	D2	1.24	N	N		nil
3	9	1986	D4	1.3	N	N		nil
3	9	1986	D7	1.27	Y	N		nil
3	9	1986	D8	1.22	N	N		nil
3	9	1986	D11	1.19	N	N		nil
4	9	1986	C1	1.22	N	N		nil
4	9	1986	C4	1.2	N	N		nil
4	9	1986	C6	1.26	N	N		nil
4	9	1986	C9	1.2	N	N		nil
4	9	1986	D2	1.24	N	N		nil
4	9	1986	D4	1.3	N	N		nil
4	9	1986	D7	1.25	N	N		nil
4	9	1986	D8	1.22	N	N		nil
4	9	1986	D11	1.26	Y	N		nil
5	9	1986	C1	1.21	N	N		nil
5	9	1986	C4	1.19	N	N		nil
5	9	1986	C6	1.25	N	N		nil
5	9	1986	C9	1.28	Y	N		nil
5	9	1986	D2	1.22	N	N		nil
5	9	1986	D4	1.29	N	N		nil
5	9	1986	D7	1.23	N	N		nil
5	9	1986	D8	1.22	N	N		nil
5	9	1986	D11	1.23	N	N		nil
6	9	1986	C1	1.21	N	N		nil
6	9	1986	C4	1.18	N	N		nil
6	9	1986	C6	1.24	N	N		nil
6	9	1986	C9	1.26	N	N		nil
6	9	1986	D2	1.21	N	N		nil
6	9	1986	D4	1.28	N	N		nil
6	9	1986	D7	1.2	N	N		nil
6	9	1986	D8	1.22	N	N		nil
6	9	1986	D11	1.2	N	N		nil
7	9	1986	C1	1.22	N	N		nil
7	9	1986	C4	1.3	Y	N		nil
7	9	1986	C6	1.22	N	N		nil
7	9	1986	C9	1.24	N	N		nil
7	9	1986	D2	1.2	N	N		nil
7	9	1986	D4	1.28	N	N		nil
7	9	1986	D7	1.18	N	N		nil
7	9	1986	D8	1.22	N	N		nil
7	9	1986	D11	1.17	N	N		nil
8	9	1986	C1	1.21	N	N		nil
8	9	1986	C4	1.28	N	N		nil
8	9	1986	C6	1.22	N	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
8	9	1986	C9	1.23	N	N		nil
8	9	1986	D2	1.19	N	N		nil
8	9	1986	D4	1.28	N	N		nil
8	9	1986	D7	1.28	Y	N		nil
8	9	1986	D8	1.24	N	N		nil
8	9	1986	D11	1.16	N	N		nil
9	9	1986	C1	1.2	N	N		nil
9	9	1986	C4	1.27	N	N		nil
9	9	1986	C6	1.21	N	N		nil
9	9	1986	C9	1.23	N	N		nil
9	9	1986	D2	1.28	Y	N		nil
9	9	1986	D4	1.27	N	N		nil
9	9	1986	D7	1.25	N	N		nil
9	9	1986	D8	1.25	N	N		nil
9	9	1986	D11	1.28	Y	N		nil
10	9	1986	C1	1.2	N	N	3	nil
10	9	1986	C4	1.26	N	N	3	nil
10	9	1986	C6	1.21	N	N	3	nil
10	9	1986	C9	1.24	N	N	3	nil
10	9	1986	D2	1.28	N	N	3	nil
10	9	1986	D4	1.28	N	N	3	nil
10	9	1986	D7	1.25	N	N	3	nil
10	9	1986	D8	1.27	Y	N	3	nil
10	9	1986	D11	1.26	N	N	3	nil
11	9	1986	C1	1.2	N	N		nil
11	9	1986	C4	1.23	N	N		nil
11	9	1986	C6	1.2	N	N		nil
11	9	1986	C9	1.23	N	N		nil
11	9	1986	D2	1.26	N	N		nil
11	9	1986	D4	1.28	N	N		nil
11	9	1986	D7	1.23	N	N		nil
11	9	1986	D8	1.28	N	N		nil
11	9	1986	D11	1.24	N	N		nil
12	9	1986	C1	1.19	N	N		nil
12	9	1986	C4	1.24	N	N		nil
12	9	1986	C6	1.2	N	N		nil
12	9	1986	C9	1.22	N	N		nil
12	9	1986	D2	1.24	N	N		nil
12	9	1986	D4	1.28	N	N		nil
12	9	1986	D7	1.22	N	N		nil
12	9	1986	D8	1.28	N	N		nil
12	9	1986	D11	1.21	N	N		nil
13	9	1986	C1	1.2	N	N		nil
13	9	1986	C4	1.22	N	N		nil
13	9	1986	C6	1.19	N	N		nil
13	9	1986	C9	1.21	N	N		nil
13	9	1986	D2	1.24	N	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
13	9	1986	D4	1.28	N	N		nil
13	9	1986	D7	1.2	N	N		nil
13	9	1986	D8	1.27	N	N		nil
13	9	1986	D11	1.18	N	N		nil
14	9	1986	C1	1.2	N	N		nil
14	9	1986	C4	1.21	N	N		nil
14	9	1986	C6	1.3	Y	N		nil
14	9	1986	C9	1.2	N	N		nil
14	9	1986	D2	1.22	N	N		nil
14	9	1986	D4	1.27	N	N		nil
14	9	1986	D7	1.19	N	N		nil
14	9	1986	D8	1.27	N	N		nil
14	9	1986	D11	1.16	N	N		nil
15	9	1986	C1	1.2	N	N		nil
15	9	1986	C4	1.2	N	N		nil
15	9	1986	C6	1.29	N	N		nil
15	9	1986	C9	1.18	N	N		nil
15	9	1986	D2	1.21	N	N		nil
15	9	1986	D4	1.26	N	N		nil
15	9	1986	D7	1.18	N	N		nil
15	9	1986	D8	1.27	N	N		nil
15	9	1986	D11	1.26	Y	N		nil
16	9	1986	C1	1.19	N	N		nil
16	9	1986	C4	1.18	N	N		nil
16	9	1986	C6	1.28	N	N		nil
16	9	1986	C9	1.29	Y	N		nil
16	9	1986	D2	1.2	N	N		nil
16	9	1986	D4	1.26	N	N		nil
16	9	1986	D7	1.27	Y	N		nil
16	9	1986	D8	1.27	N	N		nil
16	9	1986	D11	1.24	N	N		nil
17	9	1986	C1	1.32	Y	N		nil
17	9	1986	C4	1.17	N	N		nil
17	9	1986	C6	1.27	N	N		nil
17	9	1986	C9	1.28	N	N		nil
17	9	1986	D2	1.18	N	N		nil
17	9	1986	D4	1.26	N	N		nil
17	9	1986	D7	1.26	N	N		nil
17	9	1986	D8	1.28	N	N		nil
17	9	1986	D11	1.22	N	N		nil
18	9	1986	C1	1.29	N	N		nil
18	9	1986	C4	1.3	Y	N		nil
18	9	1986	C6	1.25	N	N		nil
18	9	1986	C9	1.26	N	N		nil
18	9	1986	D2	1.17	N	N		nil
18	9	1986	D4	1.26	N	N		nil
18	9	1986	D7	1.24	N	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
18	9	1986	D8	1.28	N	N		nil
18	9	1986	D11	1.2	N	N		nil
19	9	1986	C1	1.28	N	N		nil
19	9	1986	C4	1.28	N	N		nil
19	9	1986	C6	1.24	N	N		nil
19	9	1986	C9	1.25	N	N		nil
19	9	1986	D2	1.16	N	N		nil
19	9	1986	D4	1.26	N	N		nil
19	9	1986	D7	1.22	N	N		nil
19	9	1986	D8	1.28	N	N		nil
19	9	1986	D11	1.18	N	N		nil
20	9	1986	C1	1.26	N	N		nil
20	9	1986	C4	1.26	N	N		nil
20	9	1986	C6	1.24	N	N		nil
20	9	1986	C9	1.24	N	N		nil
20	9	1986	D2	1.28	Y	N		nil
20	9	1986	D4	1.25	N	N		nil
20	9	1986	D7	1.21	N	N		nil
20	9	1986	D8	1.28	N	N		nil
20	9	1986	D11	1.29	Y	N		nil
21	9	1986	C1	1.26	N	N		nil
21	9	1986	C4	1.25	N	N		nil
21	9	1986	C6	1.22	N	N		nil
21	9	1986	C9	1.23	N	N		nil
21	9	1986	D2	1.26	N	N		nil
21	9	1986	D4	1.25	N	N		nil
21	9	1986	D7	1.2	N	N		nil
21	9	1986	D8	1.27	N	N		nil
21	9	1986	D11	1.26	N	N		nil
22	9	1986	C1	1.25	N	N		nil
22	9	1986	C4	1.23	N	N		nil
22	9	1986	C6	1.21	N	N		nil
22	9	1986	C9	1.22	N	N		nil
22	9	1986	D2	1.25	N	N		nil
22	9	1986	D4	1.24	N	N		nil
22	9	1986	D7	1.18	N	N		nil
22	9	1986	D8	1.26	N	N		nil
22	9	1986	D11	1.22	N	N		nil
23	9	1986	C1	1.23	N	N		nil
23	9	1986	C4	1.22	N	N		nil
23	9	1986	C6	1.2	N	N		nil
23	9	1986	C9	1.2	N	N		nil
23	9	1986	D2	1.23	N	N		nil
23	9	1986	D4	1.24	N	N		nil
23	9	1986	D7	1.18	N	N		nil
23	9	1986	D8	1.26	N	N		nil
23	9	1986	D11	1.22	N	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
24	9	1986	C1	1.22	N	N		nil
24	9	1986	C4	1.2	N	N		nil
24	9	1986	C6	1.19	N	N		nil
24	9	1986	C9	1.19	N	N		nil
24	9	1986	D2	1.22	N	N		nil
24	9	1986	D4	1.24	N	N		nil
24	9	1986	D7	1.16	N	N		nil
24	9	1986	D8	1.25	N	N		nil
24	9	1986	D11	1.18	N	N		nil
25	9	1986	C1	1.2	N	N		nil
25	9	1986	C4	1.19	N	N		nil
25	9	1986	C6	1.18	N	N		nil
25	9	1986	C9	1.18	N	N		nil
25	9	1986	D2	1.21	N	N		nil
25	9	1986	D4	1.24	N	N		nil
25	9	1986	D7	1.16	N	N		nil
25	9	1986	D8	1.24	N	N		nil
25	9	1986	D11	1.16	N	N		nil
26	9	1986	C1	1.18	N	N		nil
26	9	1986	C4	1.18	N	N		nil
26	9	1986	C6	1.17	N	N		nil
26	9	1986	C9	1.17	N	N		nil
26	9	1986	D2	1.19	N	N		nil
26	9	1986	D4	1.23	N	N		nil
26	9	1986	D7	1.15	N	N		nil
26	9	1986	D8	1.23	N	N		nil
26	9	1986	D11	1.14	N	N		nil
27	9	1986	C1	1.17	N	N		nil
27	9	1986	C4	1.17	N	N		nil
27	9	1986	C6	1.17	N	N		nil
27	9	1986	C9	1.16	N	N		nil
27	9	1986	D2	1.18	N	N		nil
27	9	1986	D4	1.23	N	N		nil
27	9	1986	D7	1.15	N	N		nil
27	9	1986	D8	1.23	N	N		nil
27	9	1986	D11	1.14	N	N		nil
28	9	1986	C1	1.16	N	N		nil
28	9	1986	C4	1.16	N	N		nil
28	9	1986	C6	1.16	N	N		nil
28	9	1986	C9	1.14	N	N		nil
28	9	1986	D2	1.17	N	N		nil
28	9	1986	D4	1.23	N	N		nil
28	9	1986	D7	1.15	N	N		nil
28	9	1986	D8	1.23	N	N		nil
28	9	1986	D11	1.14	N	N		nil
29	9	1986	C1	1.14	N	N		nil
29	9	1986	C4	1.15	N	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
29	9	1986	C6	1.16	N	N		nil
29	9	1986	C9	1.14	N	N		nil
29	9	1986	D2	1.16	N	N		nil
29	9	1986	D4	1.23	N	N		nil
29	9	1986	D7	1.14	N	N		nil
29	9	1986	D8	1.22	N	N		nil
29	9	1986	D11	1.13	N	N		nil
30	9	1986	C1	1.12	N	N		nil
30	9	1986	C4	1.29	Y	N		nil
30	9	1986	C6	1.29	Y	N		nil
30	9	1986	C9	1.12	N	N		nil
30	9	1986	D2	1.15	N	N		nil
30	9	1986	D4	1.23	N	N		nil
30	9	1986	D7	1.14	N	N		nil
30	9	1986	D8	1.22	N	N		nil
30	9	1986	D11	1.12	N	N		nil
1	10	1986	C1	1.12	N	N		nil
1	10	1986	C4	1.28	N	N		nil
1	10	1986	C6	1.28	N	N		nil
1	10	1986	C9	1.11	N	N		nil
1	10	1986	D2	1.14	N	N		nil
1	10	1986	D4	1.22	N	N		nil
1	10	1986	D7	1.13	N	N		nil
1	10	1986	D8	1.21	N	N		nil
1	10	1986	D11	1.1	N	N		nil
2	10	1986	C1	1.12	N	N		nil
2	10	1986	C4	1.26	N	N		nil
2	10	1986	C6	1.27	N	N		nil
2	10	1986	C9	1.1	N	N		nil
2	10	1986	D2	1.12	N	N		nil
2	10	1986	D4	1.22	N	N		nil
2	10	1986	D7	1.12	N	N		nil
2	10	1986	D8	1.2	N	N		nil
2	10	1986	D11	1.1	N	N		nil
3	10	1986	C1	1.12	N	N		nil
3	10	1986	C4	1.25	N	N		nil
3	10	1986	C6	1.26	N	N		nil
3	10	1986	C9	1.3	Y	N		nil
3	10	1986	D2	1.12	N	N		nil
3	10	1986	D4	1.22	N	N		nil
3	10	1986	D7	1.12	N	N		nil
3	10	1986	D8	1.2	N	N		nil
3	10	1986	D11	1.1	N	N		nil
4	10	1986	C1	1.12	N	N		nil
4	10	1986	C4	1.24	N	N		nil
4	10	1986	C6	1.25	N	N		nil
4	10	1986	C9	1.28	N	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
4	10	1986	D2	1.25	Y	N		nil
4	10	1986	D4	1.22	N	N		nil
4	10	1986	D7	1.11	N	N		nil
4	10	1986	D8	1.18	N	N		nil
4	10	1986	D11	1.08	N	N		nil
5	10	1986	C1	1.3	Y	N		nil
5	10	1986	C4	1.23	N	N		nil
5	10	1986	C6	1.24	N	N		nil
5	10	1986	C9	1.27	N	N		nil
5	10	1986	D2	1.24	N	N		nil
5	10	1986	D4	1.2	N	N		nil
5	10	1986	D7	1.28	Y	N		nil
5	10	1986	D8	1.3	Y	N		nil
5	10	1986	D11	1.08	N	N		nil
6	10	1986	C1	1.28	N	N		nil
6	10	1986	C4	1.21	N	N		nil
6	10	1986	C6	1.23	N	N		nil
6	10	1986	C9	1.26	N	N		nil
6	10	1986	D2	1.23	N	N		nil
6	10	1986	D4	1.2	N	N		nil
6	10	1986	D7	1.26	N	N		nil
6	10	1986	D8	1.3	N	N		nil
6	10	1986	D11	1.26	N	N		nil
7	10	1986	C1	1.28	N	N		nil
7	10	1986	C4	1.21	N	N		nil
7	10	1986	C6	1.23	N	N		nil
7	10	1986	C9	1.25	N	N		nil
7	10	1986	D2	1.23	N	N		nil
7	10	1986	D4	1.2	N	N		nil
7	10	1986	D7	1.26	N	N		nil
7	10	1986	D8	1.3	N	N		nil
7	10	1986	D11	1.24	N	N		nil
8	10	1986	C1	1.27	N	N	3	nil
8	10	1986	C4	1.22	N	N	3	nil
8	10	1986	C6	1.24	N	N	3	nil
8	10	1986	C9	1.26	N	N	3	nil
8	10	1986	D2	1.23	N	N	3	nil
8	10	1986	D4	1.22	N	N	3	nil
8	10	1986	D7	1.28	N	N	3	nil
8	10	1986	D8	1.31	N	N	3	nil
8	10	1986	D11	1.23	N	N	3	nil
9	10	1986	C1	1.26	N	N		nil
9	10	1986	C4	1.21	N	N		nil
9	10	1986	C6	1.23	N	N		nil
9	10	1986	C9	1.25	N	N		nil
9	10	1986	D2	1.22	N	N		nil
9	10	1986	D4	1.22	N	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
9	10	1986	D7	1.27	N	N		nil
9	10	1986	D8	1.31	N	N		nil
9	10	1986	D11	1.21	N	N		nil
10	10	1986	C1	1.26	N	N		nil
10	10	1986	C4	1.21	N	N		nil
10	10	1986	C6	1.23	N	N		nil
10	10	1986	C9	1.24	N	N		nil
10	10	1986	D2	1.22	N	N		nil
10	10	1986	D4	1.23	N	N		nil
10	10	1986	D7	1.26	N	N		nil
10	10	1986	D8	1.3	N	N		nil
10	10	1986	D11	1.2	N	N		nil
11	10	1986	C1	1.24	N	N		nil
11	10	1986	C4	1.2	N	N		nil
11	10	1986	C6	1.22	N	N		nil
11	10	1986	C9	1.24	N	N		nil
11	10	1986	D2	1.2	N	N		nil
11	10	1986	D4	1.24	N	N		nil
11	10	1986	D7	1.25	N	N		nil
11	10	1986	D8	1.31	N	N		nil
11	10	1986	D11	1.26	Y	N		nil
12	10	1986	C1	1.26	N	N		nil
12	10	1986	C4	1.22	N	N		nil
12	10	1986	C6	1.24	N	N		nil
12	10	1986	C9	1.24	N	N		nil
12	10	1986	D2	1.22	N	N		nil
12	10	1986	D4	1.27	N	N		nil
12	10	1986	D7	1.27	N	N		nil
12	10	1986	D8	1.32	N	N		nil
12	10	1986	D11	1.26	N	N		nil
13	10	1986	C1	1.24	N	N		nil
13	10	1986	C4	1.26	N	N		nil
13	10	1986	C6	1.23	N	N		nil
13	10	1986	C9	1.24	N	N		nil
13	10	1986	D2	1.21	N	N		nil
13	10	1986	D4	1.27	N	N		nil
13	10	1986	D7	1.26	N	N		nil
13	10	1986	D8	1.32	N	N		nil
13	10	1986	D11	1.25	N	N		nil
14	10	1986	C1	1.25	N	N		nil
14	10	1986	C4	1.27	N	N		nil
14	10	1986	C6	1.24	N	N		nil
14	10	1986	C9	1.25	N	N		nil
14	10	1986	D2	1.22	N	N		nil
14	10	1986	D4	1.28	N	N		nil
14	10	1986	D7	1.26	N	N		nil
14	10	1986	D8	1.33	N	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
14	10	1986	D11	1.23	N	N		nil
15	10	1986	C1	1.26	N	N		nil
15	10	1986	C4	1.28	N	N		nil
15	10	1986	C6	1.25	N	N		nil
15	10	1986	C9	1.25	N	N		nil
15	10	1986	D2	1.22	N	N		nil
15	10	1986	D4	1.3	N	N		nil
15	10	1986	D7	1.27	N	N		nil
15	10	1986	D8	1.34	N	N		nil
15	10	1986	D11	1.22	N	N		nil
16	10	1986	C1	1.26	N	N		nil
16	10	1986	C4	1.26	N	N		nil
16	10	1986	C6	1.24	N	N		nil
16	10	1986	C9	1.25	N	N		nil
16	10	1986	D2	1.21	N	N		nil
16	10	1986	D4	1.28	N	N		nil
16	10	1986	D7	1.26	N	N		nil
16	10	1986	D8	1.32	N	N		nil
16	10	1986	D11	1.2	N	N		nil
17	10	1986	C1	1.25	N	N		nil
17	10	1986	C4	1.26	N	N		nil
17	10	1986	C6	1.24	N	N		nil
17	10	1986	C9	1.23	N	N		nil
17	10	1986	D2	1.2	N	N		nil
17	10	1986	D4	1.29	N	N		nil
17	10	1986	D7	1.25	N	N		nil
17	10	1986	D8	1.31	N	N		nil
17	10	1986	D11	1.19	N	N		nil
18	10	1986	C1	1.25	N	N		nil
18	10	1986	C4	1.25	N	N		nil
18	10	1986	C6	1.24	N	N		nil
18	10	1986	C9	1.23	N	N		nil
18	10	1986	D2	1.32	Y	N		nil
18	10	1986	D4	1.36	N	N		nil
18	10	1986	D7	1.26	N	N		nil
18	10	1986	D8	1.32	N	N		nil
18	10	1986	D11	1.26	N	N		nil
19	10	1986	C1	1.24	N	N		nil
19	10	1986	C4	1.25	N	N		nil
19	10	1986	C6	1.24	N	N		nil
19	10	1986	C9	1.23	N	N		nil
19	10	1986	D2	1.29	N	N		nil
19	10	1986	D4	1.36	N	N		nil
19	10	1986	D7	1.25	N	N		nil
19	10	1986	D8	1.31	N	N		nil
19	10	1986	D11	1.24	N	N		nil
20	10	1986	C1	1.24	N	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
20	10	1986	C4	1.24	N	N		nil
20	10	1986	C6	1.24	N	N		nil
20	10	1986	C9	1.23	N	N		nil
20	10	1986	D2	1.28	N	N		nil
20	10	1986	D4	1.37	N	N		nil
20	10	1986	D7	1.24	N	N		nil
20	10	1986	D8	1.32	N	N		nil
20	10	1986	D11	1.23	N	N		nil
21	10	1986	C1	1.24	N	N		nil
21	10	1986	C4	1.24	N	N		nil
21	10	1986	C6	1.23	N	N		nil
21	10	1986	C9	1.22	N	N		nil
21	10	1986	D2	1.27	N	N		nil
21	10	1986	D4	1.36	N	N		nil
21	10	1986	D7	1.24	N	N		nil
21	10	1986	D8	1.31	N	N		nil
21	10	1986	D11	1.21	N	N		nil
22	10	1986	C1	1.23	N	N		nil
22	10	1986	C4	1.22	N	N		nil
22	10	1986	C6	1.22	N	N		nil
22	10	1986	C9	1.21	N	N		nil
22	10	1986	D2	1.25	N	N		nil
22	10	1986	D4	1.35	N	N		nil
22	10	1986	D7	1.23	N	N		nil
22	10	1986	D8	1.3	N	N		nil
22	10	1986	D11	1.19	N	N		nil
23	10	1986	C1	1.21	N	N		nil
23	10	1986	C4	1.21	N	N		nil
23	10	1986	C6	1.21	N	N		nil
23	10	1986	C9	1.2	N	N		nil
23	10	1986	D2	1.24	N	N		nil
23	10	1986	D4	1.34	N	N		nil
23	10	1986	D7	1.22	N	N		nil
23	10	1986	D8	1.29	N	N		nil
23	10	1986	D11	1.17	N	N		nil
24	10	1986	C1	1.2	N	N		nil
24	10	1986	C4	1.2	N	N		nil
24	10	1986	C6	1.2	N	N		nil
24	10	1986	C9	1.18	N	N		nil
24	10	1986	D2	1.22	N	N		nil
24	10	1986	D4	1.34	N	N		nil
24	10	1986	D7	1.21	N	N		nil
24	10	1986	D8	1.28	N	N		nil
24	10	1986	D11	1.16	N	N		nil
25	10	1986	C1	1.18	N	N		nil
25	10	1986	C4	1.18	N	N		nil
25	10	1986	C6	1.2	N	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
25	10	1986	C9	1.17	N	N		nil
25	10	1986	D2	1.21	N	N		nil
25	10	1986	D4	1.33	N	N		nil
25	10	1986	D7	1.21	N	N		nil
25	10	1986	D8	1.27	N	N		nil
25	10	1986	D11	1.15	N	N		nil
26	10	1986	C1	1.2	N	N		nil
26	10	1986	C4	1.2	N	N		nil
26	10	1986	C6	1.2	N	N		nil
26	10	1986	C9	1.18	N	N		nil
26	10	1986	D2	1.22	N	N		nil
26	10	1986	D4	1.35	N	N		nil
26	10	1986	D7	1.23	N	N		nil
26	10	1986	D8	1.28	N	N		nil
26	10	1986	D11	1.16	N	N		nil
27	10	1986	C1	1.18	N	N		nil
27	10	1986	C4	1.18	N	N		nil
27	10	1986	C6	1.2	N	N		nil
27	10	1986	C9	1.18	N	N		nil
27	10	1986	D2	1.21	N	N		nil
27	10	1986	D4	1.34	N	N		nil
27	10	1986	D7	1.22	N	N		nil
27	10	1986	D8	1.27	N	N		nil
27	10	1986	D11	1.14	N	N		nil
28	10	1986	C1	1.17	N	N		nil
28	10	1986	C4	1.17	N	N		nil
28	10	1986	C6	1.2	N	N		nil
28	10	1986	C9	1.16	N	N		nil
28	10	1986	D2	1.2	N	N		nil
28	10	1986	D4	1.34	N	N		nil
28	10	1986	D7	1.21	N	N		nil
28	10	1986	D8	1.26	N	N		nil
28	10	1986	D11	1.14	N	N		nil
29	10	1986	C1	1.2	N	N		nil
29	10	1986	C4	1.2	N	N		nil
29	10	1986	C6	1.22	N	N		nil
29	10	1986	C9	1.18	N	N		nil
29	10	1986	D2	1.21	N	N		nil
29	10	1986	D4	1.36	N	N		nil
29	10	1986	D7	1.23	N	N		nil
29	10	1986	D8	1.3	N	N		nil
29	10	1986	D11	1.16	N	N		nil
30	10	1986	C1	1.22	N	N		nil
30	10	1986	C4	1.2	N	N		nil
30	10	1986	C6	1.22	N	N		nil
30	10	1986	C9	1.18	N	N		nil
30	10	1986	D2	1.22	N	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
30	10	1986	D4	1.37	N	N		nil
30	10	1986	D7	1.24	N	N		nil
30	10	1986	D8	1.31	N	N		nil
30	10	1986	D11	1.16	N	N		nil
31	10	1986	C1	1.22	N	N		nil
31	10	1986	C4	1.2	N	N		nil
31	10	1986	C6	1.22	N	N		nil
31	10	1986	C9	1.18	N	N		nil
31	10	1986	D2	1.21	N	N		nil
31	10	1986	D4	1.36	N	N		nil
31	10	1986	D7	1.24	N	N		nil
31	10	1986	D8	1.31	N	N		nil
31	10	1986	D11	1.15	N	N		nil
1	11	1986	C1	1.22	N	N		nil
1	11	1986	C4	1.2	N	N		nil
1	11	1986	C6	1.22	N	N		nil
1	11	1986	C9	1.18	N	N		nil
1	11	1986	D2	1.21	N	N		nil
1	11	1986	D4	1.36	N	N		nil
1	11	1986	D7	1.24	N	N		nil
1	11	1986	D8	1.32	N	N		nil
1	11	1986	D11	1.16	N	N		nil
2	11	1986	C1	1.21	N	N		nil
2	11	1986	C4	1.28	Y	N		nil
2	11	1986	C6	1.22	Y	N		nil
2	11	1986	C9	1.29	Y	N		nil
2	11	1986	D2	1.2	N	N		nil
2	11	1986	D4	1.36	N	N		nil
2	11	1986	D7	1.24	N	N		nil
2	11	1986	D8	1.32	N	N		nil
2	11	1986	D11	1.28	Y	N		nil
3	11	1986	C1	1.22	N	N		nil
3	11	1986	C4	1.27	N	N		nil
3	11	1986	C6	1.22	N	N		nil
3	11	1986	C9	1.28	N	N		nil
3	11	1986	D2	1.3	N	N		nil
3	11	1986	D4	1.36	N	N		nil
3	11	1986	D7	1.24	N	N		nil
3	11	1986	D8	1.33	N	N		nil
3	11	1986	D11	1.26	N	N		nil
4	11	1986	C1	1.22	N	N		nil
4	11	1986	C4	1.27	N	N		nil
4	11	1986	C6	1.22	N	N		nil
4	11	1986	C9	1.28	N	N		nil
4	11	1986	D2	1.3	N	N		nil
4	11	1986	D4	1.37	N	N		nil
4	11	1986	D7	1.24	N	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
4	11	1986	D8	1.36	N	N		nil
4	11	1986	D11	1.26	N	N		nil
5	11	1986	C1	1.22	N	N		nil
5	11	1986	C4	1.26	N	N		nil
5	11	1986	C6	1.22	N	N		nil
5	11	1986	C9	1.28	N	N		nil
5	11	1986	D2	1.28	N	N		nil
5	11	1986	D4	1.37	N	N		nil
5	11	1986	D7	1.25	N	N		nil
5	11	1986	D8	1.36	N	N		nil
5	11	1986	D11	1.24	N	N		nil
6	11	1986	C1	1.21	N	N		nil
6	11	1986	C4	1.24	N	N		nil
6	11	1986	C6	1.22	N	N		nil
6	11	1986	C9	1.26	N	N		nil
6	11	1986	D2	1.27	N	N		nil
6	11	1986	D4	1.36	N	N		nil
6	11	1986	D7	1.24	N	N		nil
6	11	1986	D8	1.35	N	N		nil
6	11	1986	D11	1.22	N	N		nil
7	11	1986	C1	1.2	N	N	4	nil
7	11	1986	C4	1.24	N	N	3	nil
7	11	1986	C6	1.21	N	N	3	nil
7	11	1986	C9	1.25	N	N	3	nil
7	11	1986	D2	1.26	N	N	3	nil
7	11	1986	D4	1.36	N	N	3	nil
7	11	1986	D7	1.24	N	N	3	nil
7	11	1986	D8	1.35	N	N	3	nil
7	11	1986	D11	1.2	N	N	3	nil
8	11	1986	C1	1.2	N	N		nil
8	11	1986	C4	1.24	N	N		nil
8	11	1986	C6	1.21	N	N		nil
8	11	1986	C9	1.24	N	N		nil
8	11	1986	D2	1.24	N	N		nil
8	11	1986	D4	1.35	N	N		nil
8	11	1986	D7	1.23	N	N		nil
8	11	1986	D8	1.34	N	N		nil
8	11	1986	D11	1.19	N	N		nil
9	11	1986	C1	1.18	N	N		nil
9	11	1986	C4	1.2	N	N		nil
9	11	1986	C6	1.2	N	N		nil
9	11	1986	C9	1.22	N	N		nil
9	11	1986	D2	1.23	N	N		nil
9	11	1986	D4	1.34	N	N		nil
9	11	1986	D7	1.23	N	N		nil
9	11	1986	D8	1.33	N	N		nil
9	11	1986	D11	1.18	N	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
10	11	1986	C1	1.29	Y	N		nil
10	11	1986	C4	1.19	N	N		nil
10	11	1986	C6	1.19	N	N		nil
10	11	1986	C9	1.21	N	N		nil
10	11	1986	D2	1.22	N	N		nil
10	11	1986	D4	1.34	N	N		nil
10	11	1986	D7	1.22	N	N		nil
10	11	1986	D8	1.32	N	N		nil
10	11	1986	D11	1.17	N	N		nil
11	11	1986	C1	1.28	N	N		nil
11	11	1986	C4	1.19	N	N		nil
11	11	1986	C6	1.19	N	N		nil
11	11	1986	C9	1.2	N	N		nil
11	11	1986	D2	1.21	N	N		nil
11	11	1986	D4	1.34	N	N		nil
11	11	1986	D7	1.22	N	N		nil
11	11	1986	D8	1.32	N	N		nil
11	11	1986	D11	1.16	N	N		nil
12	11	1986	C1	1.3	N	N		nil
12	11	1986	C4	1.2	N	N		nil
12	11	1986	C6	1.21	N	N		nil
12	11	1986	C9	1.22	N	N		nil
12	11	1986	D2	1.23	N	N		nil
12	11	1986	D4	1.35	N	N		nil
12	11	1986	D7	1.24	N	N		nil
12	11	1986	D8	1.34	N	N		nil
12	11	1986	D11	1.17	N	N		nil
13	11	1986	C1	1.29	N	N		nil
13	11	1986	C4	1.2	N	N		nil
13	11	1986	C6	1.21	N	N		nil
13	11	1986	C9	1.21	N	N		nil
13	11	1986	D2	1.22	N	N		nil
13	11	1986	D4	1.35	N	N		nil
13	11	1986	D7	1.24	N	N		nil
13	11	1986	D8	1.34	N	N		nil
13	11	1986	D11	1.17	N	N		nil
14	11	1986	C1	1.3	N	N		nil
14	11	1986	C4	1.21	N	N		nil
14	11	1986	C6	1.22	N	N		nil
14	11	1986	C9	1.23	N	N		nil
14	11	1986	D2	1.23	N	N		nil
14	11	1986	D4	1.36	N	N		nil
14	11	1986	D7	1.25	N	N		nil
14	11	1986	D8	1.36	N	N		nil
14	11	1986	D11	1.3	Y	N		nil
15	11	1986	C1	1.29	N	N		nil
15	11	1986	C4	1.22	N	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
15	11	1986	C6	1.23	N	N		nil
15	11	1986	C9	1.23	N	N		nil
15	11	1986	D2	1.23	N	N		nil
15	11	1986	D4	1.34	N	N		nil
15	11	1986	D7	1.25	N	N		nil
15	11	1986	D8	1.36	N	N		nil
15	11	1986	D11	1.28	N	N		nil
16	11	1986	C1	1.29	N	N		nil
16	11	1986	C4	1.21	N	N		nil
16	11	1986	C6	1.22	N	N		nil
16	11	1986	C9	1.22	N	N		nil
16	11	1986	D2	1.22	N	N		nil
16	11	1986	D4	1.36	N	N		nil
16	11	1986	D7	1.25	N	N		nil
16	11	1986	D8	1.36	N	N		nil
16	11	1986	D11	1.26	N	N		nil
17	11	1986	C1	1.28	N	N		nil
17	11	1986	C4	1.2	N	N		nil
17	11	1986	C6	1.22	N	N		nil
17	11	1986	C9	1.21	N	N		nil
17	11	1986	D2	1.21	N	N		nil
17	11	1986	D4	1.35	N	N		nil
17	11	1986	D7	1.24	N	N		nil
17	11	1986	D8	1.35	N	N		nil
17	11	1986	D11	1.24	N	N		nil
18	11	1986	C1	1.27	N	N		nil
18	11	1986	C4	1.29	N	N		nil
18	11	1986	C6	1.22	N	N		nil
18	11	1986	C9	1.21	N	N		nil
18	11	1986	D2	1.21	N	N		nil
18	11	1986	D4	1.36	N	N		nil
18	11	1986	D7	1.24	N	N		nil
18	11	1986	D8	1.34	N	N		nil
18	11	1986	D11	1.23	N	N		nil
19	11	1986	C1	1.26	N	N		nil
19	11	1986	C4	1.27	N	N		nil
19	11	1986	C6	1.21	N	N		nil
19	11	1986	C9	1.2	N	N		nil
19	11	1986	D2	1.2	N	N		nil
19	11	1986	D4	1.35	N	N		nil
19	11	1986	D7	1.24	N	N		nil
19	11	1986	D8	1.26	N	N		nil
19	11	1986	D11	1.2	N	N		nil
20	11	1986	C1	1.25	N	N		nil
20	11	1986	C4	1.25	N	N		nil
20	11	1986	C6	1.21	N	N		nil
20	11	1986	C9	1.19	N	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
20	11	1986	D2	1.19	N	N		nil
20	11	1986	D4	1.35	N	N		nil
20	11	1986	D7	1.23	N	N		nil
20	11	1986	D8	1.25	N	N		nil
20	11	1986	D11	1.28	N	N		nil
21	11	1986	C1	1.25	N	N		nil
21	11	1986	C4	1.24	N	N		nil
21	11	1986	C6	1.2	N	N		nil
21	11	1986	C9	1.19	N	N		nil
21	11	1986	D2	1.18	N	N		nil
21	11	1986	D4	1.34	N	N		nil
21	11	1986	D7	1.23	N	N		nil
21	11	1986	D8	1.29	N	N		nil
21	11	1986	D11	1.25	N	N		nil
22	11	1986	C1	1.24	N	N		nil
22	11	1986	C4	1.24	N	N		nil
22	11	1986	C6	1.2	N	N		nil
22	11	1986	C9	1.19	N	N		nil
22	11	1986	D2	1.18	N	N		nil
22	11	1986	D4	1.34	N	N		nil
22	11	1986	D7	1.23	N	N		nil
22	11	1986	D8	1.29	N	N		nil
22	11	1986	D11	1.25	N	N		nil
23	11	1986	C1	1.24	N	N		nil
23	11	1986	C4	1.23	N	N		nil
23	11	1986	C6	1.21	N	N		nil
23	11	1986	C9	1.29	N	N		nil
23	11	1986	D2	1.29	N	N		nil
23	11	1986	D4	1.34	N	N		nil
23	11	1986	D7	1.23	N	N		nil
23	11	1986	D8	1.29	N	N		nil
23	11	1986	D11	1.24	N	N		nil
24	11	1986	C1	1.23	N	N		nil
24	11	1986	C4	1.23	N	N		nil
24	11	1986	C6	1.2	N	N		nil
24	11	1986	C9	1.28	N	N		nil
24	11	1986	D2	1.28	N	N		nil
24	11	1986	D4	1.34	N	N		nil
24	11	1986	D7	1.22	N	N		nil
24	11	1986	D8	1.29	N	N		nil
24	11	1986	D11	1.22	N	N		nil
25	11	1986	C1	1.23	N	N		nil
25	11	1986	C4	1.22	N	N		nil
25	11	1986	C6	1.3	Y	N		nil
25	11	1986	C9	1.27	N	N		nil
25	11	1986	D2	1.26	N	N		nil
25	11	1986	D4	1.34	N	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
25	11	1986	D7	1.22	N	N		nil
25	11	1986	D8	1.27	N	N		nil
25	11	1986	D11	1.21	N	N		nil
26	11	1986	C1	1.22	N	N		nil
26	11	1986	C4	1.2	N	N		nil
26	11	1986	C6	1.3	N	N		nil
26	11	1986	C9	1.26	N	N		nil
26	11	1986	D2	1.25	N	N		nil
26	11	1986	D4	1.33	N	N		nil
26	11	1986	D7	1.21	N	N		nil
26	11	1986	D8	1.24	N	N		nil
26	11	1986	D11	1.19	N	N		nil
27	11	1986	C1	1.2	N	N		nil
27	11	1986	C4	1.2	N	N		nil
27	11	1986	C6	1.3	N	N		nil
27	11	1986	C9	1.25	N	N		nil
27	11	1986	D2	1.24	N	N		nil
27	11	1986	D4	1.33	N	N		nil
27	11	1986	D7	1.2	N	N		nil
27	11	1986	D8	1.23	N	N		nil
27	11	1986	D11	1.28	Y	N		nil
28	11	1986	C1	1.28	Y	N		nil
28	11	1986	C4	1.19	N	N		nil
28	11	1986	C6	1.29	N	N		nil
28	11	1986	C9	1.23	N	N		nil
28	11	1986	D2	1.23	N	N		nil
28	11	1986	D4	1.33	N	N		nil
28	11	1986	D7	1.2	N	N		nil
28	11	1986	D8	1.26	N	N		nil
28	11	1986	D11	1.26	N	N		nil
29	11	1986	C1	1.26	N	N		nil
29	11	1986	C4	1.27	Y	N		nil
29	11	1986	C6	1.28	N	N		nil
29	11	1986	C9	1.22	N	N		nil
29	11	1986	D2	1.22	N	N		nil
29	11	1986	D4	1.32	N	N		nil
29	11	1986	D7	1.28	Y	N		nil
29	11	1986	D8	1.26	N	N		nil
29	11	1986	D11	1.24	N	N		nil
30	11	1986	C1	1.26	N	N		nil
30	11	1986	C4	1.26	N	N		nil
30	11	1986	C6	1.27	N	N		nil
30	11	1986	C9	1.21	N	N		nil
30	11	1986	D2	1.21	N	N		nil
30	11	1986	D4	1.32	N	N		nil
30	11	1986	D7	1.29	N	N		nil
30	11	1986	D8	1.27	N	N		nil

Table 2. Daily Pond Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES
30	11	1986	D11	1.22	N	N		nil
1	12	1986	C1	1.25	N	N		nil
1	12	1986	C4	1.25	N	N		nil
1	12	1986	C6	1.27	N	N		nil
1	12	1986	C9	1.21	N	N		nil
1	12	1986	D2	1.21	N	N		nil
1	12	1986	D4	1.32	N	N		nil
1	12	1986	D7	1.28	N	N		nil
1	12	1986	D8	1.28	N	N		nil
2	12	1986	D11	1.21	N	N		nil
2	12	1986	C1	1.24	N	N		nil
2	12	1986	C4	1.24	N	N		nil
2	12	1986	C6	1.26	N	N		nil
2	12	1986	C9	1.2	N	N		nil
2	12	1986	D2	1.2	N	N		nil
2	12	1986	D4	1.32	N	N		nil
2	12	1986	D7	1.27	N	N		nil
2	12	1986	D8	1.28	N	N		nil
2	12	1986	D11	1.2	N	N		nil
3	12	1986	C1	1.24	N	N	4	nil
3	12	1986	C4	1.23	N	N	3	nil
3	12	1986	C6	1.25	N	N	3	nil
3	12	1986	C9	1.2	N	N	3	nil
3	12	1986	D2	1.2	N	N	3	nil
3	12	1986	D4	1.32	N	N	3	nil
3	12	1986	D7	1.26	N	N	3	nil
3	12	1986	D8	1.29	N	N	3	nil
3	12	1986	D11	1.2	N	N	3	nil

Table 3. Weekly and Twice Weekly Measurements. Rwanda, Cycle III, Dry Season

DAY MO. YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP			WATER TEMP @ MID			WATER TEMP @ BOT			HARD.	PH	KJELDAHL		N	N02-N	N03-N	N03-N	TOTAL N02 & N03-N	TOTAL P	ORTHOPHOSPHATE	SECHII DISK			SECHII CHLOROPHYLL		
							1	2	3	1	2	3	1	2	3			A	B								A	B	A			
25 11 1986	Y	D11	625	8.5	8.1	0.5	21.	21.	21.	21.	21.	21.	21.	21.	21.	40.	90.	8.5	3.43	0.09	0.16	0.16	0.16	0.6	0.11	18.	16.	125.				
2 12 1986	Y	C1	537	5.1	5.1	5.1	21.	21.	21.	21.	21.	21.	21.	21.	42.	77.	6.8	4.41	0.03	0.15	0.15	0.15	0.23	0.01	33.	31.	62.					
2 12 1986	Y	C4	542	2.1	2.1	2.	21.	21.	21.	21.	21.	21.	21.	21.	42.	83.	7.	3.04	0.08	0.2	0.2	0.2	0.5	0.05	23.	21.	155.					
2 12 1986	Y	C6	545	5.2	4.9	2.3	21.	21.	21.	21.	21.	21.	21.	21.	54.	102.	7.2	2.92	0.16	0.13	0.13	0.13	0.37	0.04	31.	28.	55.					
2 12 1986	Y	C9	551	4.6	3.2	0.4	20.5	20.5	20.	20.	20.	20.	20.	20.	43.	83.	7.1	2.42	0.13	0.28	0.28	0.28	0.29	0.05	21.	20.	37.					
2 12 1986	Y	D2	557	3.3	1.9	0.8	21.	21.	21.	21.	21.	21.	21.	21.	44.	77.	6.9	0.43	0.07	0.19	0.19	0.19	0.52	0.05	21.	20.	94.					
2 12 1986	Y	D4	600	4.	3.8	2.4	21.	21.	21.	21.	21.	21.	21.	21.	49.	83.	7.	1.67	0.03	0.09	0.09	0.09	0.17	0.01	33.	32.	29.					
2 12 1986	Y	D7	604	5.5	5.5	5.4	21.	21.	21.	21.	21.	21.	21.	21.	43.	77.	7.	1.3	0.03	0.09	0.09	0.09	0.16	0.01	33.	31.	26.					
2 12 1986	Y	D8	607	5.1	4.5	0.7	21.	21.	21.	21.	20.5	20.5	20.5	20.5	40.	83.	6.8	1.67	0.05	0.14	0.14	0.14	0.2	0.03	29.	28.	29.					
2 12 1986	Y	D11	615	8.8	2.3	0.6	20.	20.	20.	19.5	19.5	19.5	19.5	18.	35.	77.	8.5	2.79	0.03	0.23	0.23	0.23	0.7	0.1	16.	15.	108.					

Table 3. Weekly and Twice Weekly Measurements. Rwanda, Cycle III, Wet Season

Table with columns: DAY NO., EXTRA YEAR DATA?, DO TIME @ TOP & MID BOTTOM @ DO @ MID BOTTOM @ DO @ MID BOTTOM, WATER TEMP @ TOP & MID BOTTOM @ WATER TEMP @ TOP & MID BOTTOM @ WATER TEMP @ TOP & MID BOTTOM @, HARDO, KJELDAHL PH N, M3-N, M2-N, M3-N, TOTAL NO2 & NO3-N, P, TOTAL FOS-P, SECHII DISK, SECHII CHLOR-DISK, OPHYLL A, B, A.

Table 3. Weekly and Twice Weekly Measurements. Rwanda, Cycle III, Wet Season

DAY MO.	YEAR	EXTRA DATA?	POND#	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP			WATER TEMP @ MID			WATER TEMP @ BOTTOM			WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKAL.	HARD.	KJELDAHL		NH ₃ -N	NO ₂ -N	NO ₃ -N	TOTAL NO ₂ & NO ₃ -N	TOTAL P	ORTHO P04-P	SECHII CHLOR-DISK		
							1	2	3	1	2	3	1	2	3					A	B							A		
6	5	1986	Y	D11	3.8	3.8	3.8	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	18.	38.	83.	7.2	0.59	0.4	0.09	0.4	0.05	43.	40.	26.			
13	5	1986	Y	C1	5.2	5.1	5.1	22.	22.	22.	22.	22.	22.	22.	22.	30.	141.	7.5	5.2	0.19	0.08	0.2	0.02	32.	31.	17.				
13	5	1986	Y	C4	2.8	2.6	2.6	22.	22.	22.	22.	22.	22.	22.	22.	58.	141.	7.6	8.82	0.06	0.1	0.38	0.04	42.	38.	70.				
13	5	1986	Y	C6	4.7	4.7	4.7	22.	22.	22.	22.	22.	22.	22.	22.	57.	109.	7.4	1.74	0.14	0.05	0.3	0.02	35.	37.	25.				
13	5	1986	Y	C9	6.	6.	6.	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.	42.	135.	7.5	3.23	0.17	0.03	0.14	0.01	39.	36.	1.				
13	5	1986	Y	D2	6.2	6.2	6.2	21.	21.	21.	21.	21.	21.	21.	21.	41.	141.	7.6	7.43	0.12	0.07	0.38	0.04	32.	29.	47.				
13	5	1986	Y	D4	3.9	3.9	3.9	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.	54.	128.	7.1	2.24	0.01	0.05	0.1	0.01	45.	40.	14.				
13	5	1986	Y	D7	5.6	5.6	5.6	22.	22.	22.	22.	22.	22.	22.	22.	38.	122.	7.1	1.	0.	0.03	0.1	0.01	60.	56.	11.				
13	5	1986	Y	D8	5.6	5.6	5.6	22.	22.	22.	22.	22.	22.	22.	22.	55.	128.	7.4	0.75	0.14	0.04	0.2	0.02	61.	51.	8.				
13	5	1986	Y	D11	4.3	4.3	4.3	21.	21.	21.	21.	21.	21.	21.	21.	45.	96.	7.2	5.2	0.13	0.05	0.37	0.02	36.	46.	32.				

Table 4. Diurnal Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	D.O.				WATER			PH	
			TIME	POND#	DO-TOP	DO-MID	DO-BOT	TEMP TOP	TEMP MID		TEMP BOT
22	7	1986	545	C1	8.	8.	8.	18.	18.	18.	7.1
22	7	1986	556	C4	6.9	6.9	6.9	18.	18.	18.	7.8
22	7	1986	559	C6	8.8	8.8	8.8	18.	18.	18.	8.1
22	7	1986	603	C9	7.2	7.2	7.2	18.	18.	18.	7.6
22	7	1986	606	D2	6.3	6.3	6.3	18.	18.	18.	6.9
22	7	1986	609	D4	5.5	5.5	5.5	18.	18.	18.	6.8
22	7	1986	612	D7	6.2	6.2	6.2	18.	18.	18.	6.9
22	7	1986	615	D8	5.8	5.8	5.8	18.	18.	18.	6.8
22	7	1986	620	D11	7.	7.	7.	17.5	17.5	17.5	6.9
22	7	1986	938	C1	8.8	7.7	6.5	18.5	18.	18.	7.3
22	7	1986	944	C4	7.8	7.1	6.1	19.	18.5	18.	7.9
22	7	1986	946	C6	9.6	8.9	8.3	19.	18.5	18.	8.5
22	7	1986	950	C9	7.6	7.2	7.	19.	18.5	18.	7.8
22	7	1986	955	D2	7.2	6.5	6.	18.5	18.	18.	7.1
22	7	1986	1000	D4	6.6	5.2	4.5	18.	18.	18.	7.
22	7	1986	1005	D7	7.	6.	5.5	19.	18.	17.5	6.9
22	7	1986	1010	D8	6.6	6.3	5.4	18.5	18.	18.	6.9
22	7	1986	1015	D11	9.3	7.5	5.7	18.5	17.5	17.5	7.
22	7	1986	1335	C1	11.8	9.5	7.2	21.	19.	18.	7.6
22	7	1986	1340	C4	10.6	9.5	6.7	22.	19.	18.5	9.2
22	7	1986	1345	C6	13.4	11.8	8.7	22.	19.	18.5	8.9
22	7	1986	1350	C9	8.9	8.8	8.1	21.5	19.	18.5	8.3
22	7	1986	1355	D2	10.	8.9	6.9	22.	19.	18.	8.
22	7	1986	1358	D4	9.8	6.9	4.9	22.	19.	18.	7.4
22	7	1986	1401	D7	8.7	6.9	6.1	22.5	18.5	18.	7.2
22	7	1986	1405	D8	8.3	8.	6.4	22.	20.	18.5	7.2
22	7	1986	1410	D11	12.2	10.	5.2	22.	18.	17.5	8.3
22	7	1986	1745	C1	11.	9.1	5.9	24.	19.	18.5	7.6
22	7	1986	1752	C4	10.6	9.8	6.4	23.	19.5	18.5	9.1
22	7	1986	1755	C6	13.4	12.1	9.6	23.	19.5	18.5	9.7
22	7	1986	1800	C9	8.7	8.4	7.9	22.5	20.	18.5	8.3
22	7	1986	1805	D2	10.6	8.7	6.5	22.5	18.7	18.5	8.1
22	7	1986	1808	D4	8.6	5.7	4.1	23.	18.5	18.	7.5
22	7	1986	1810	D7	8.2	7.7	5.8	23.	19.	18.	7.5
22	7	1986	1813	D8	8.	7.8	5.5	23.	19.	18.5	7.4
22	7	1986	1818	D11	10.8	9.3	4.7	22.5	19.	17.5	8.2
22	7	1986	2130	C1	10.	9.2	5.5	21.	19.	18.5	7.3
22	7	1986	2135	C4	9.6	9.5	5.2	21.	19.5	18.5	8.8
22	7	1986	2140	C6	12.4	12.	7.8	21.	19.5	18.5	9.3
22	7	1986	2145	C9	8.6	8.6	7.5	20.5	20.	18.5	7.6
22	7	1986	2150	D2	9.	7.9	5.6	20.5	19.	18.	7.5
22	7	1986	2155	D4	7.7	6.6	3.5	20.5	19.	18.	7.1
22	7	1986	2200	D7	7.7	7.3	5.2	20.5	19.	18.	7.
22	7	1986	2204	D8	7.5	7.5	5.1	20.5	20.	18.5	7.4

Table 4. Diurnal Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP			PH
								TOP	MID	BOT	
22	7	1986	2210	D11	9.8	9.4	3.8	20.	19.	18.	7.2
23	7	1986	130	C1	9.4	9.	5.3	19.5	19.5	18.5	7.1
23	7	1986	135	C4	9.	8.6	3.7	19.5	19.5	18.5	8.8
23	7	1986	140	C6	13.4	6.9	6.2	19.	19.	18.5	9.3
23	7	1986	145	C9	7.8	7.6	7.3	19.	19.	19.	7.6
23	7	1986	150	D2	8.1	7.9	4.6	19.	19.	18.	7.3
23	7	1986	200	D4	6.6	6.2	3.	19.	19.	18.	7.1
23	7	1986	203	D7	7.3	7.1	5.1	19.	19.	18.	7.2
23	7	1986	208	D8	7.	6.9	3.5	19.	19.	18.5	7.
23	7	1986	215	D11	8.9	8.5	3.	18.5	18.5	18.	7.4
23	7	1986	544	C1	7.9	7.9	7.9	18.	18.	18.	7.
23	7	1986	550	C4	7.5	7.5	7.5	18.	18.	18.	6.9
23	7	1986	600	C6	9.6	9.5	9.5	18.	18.	18.	7.
23	7	1986	612	C9	7.	7.	7.	18.	18.	18.	6.8
23	7	1986	617	D2	6.7	6.6	6.6	18.	18.	18.	7.1
23	7	1986	625	D4	5.2	5.2	5.1	18.	18.	18.	7.5
23	7	1986	635	D7	6.1	6.1	6.	18.	18.	18.	9.
23	7	1986	640	D8	5.9	5.8	5.8	18.	18.	18.	8.2
23	7	1986	650	D11	6.5	5.5	5.5	18.	18.	18.	7.1
5	8	1986	540	C1	10.	9.9	9.7	20.	20.	20.	8.8
5	8	1986	546	C4	8.1	7.8	3.4	19.	19.	19.	9.1
5	8	1986	551	C6	7.3	7.3	7.3	20.	20.	20.	8.4
5	8	1986	600	C9	6.7	6.7	6.7	19.	19.	19.	8.1
5	8	1986	605	D2	7.1	7.1	2.1	19.5	19.5	19.5	8.3
5	8	1986	610	D4	6.3	6.2	5.5	19.5	19.5	19.5	7.3
5	8	1986	616	D7	6.9	6.9	6.7	20.	20.	19.5	7.2
5	8	1986	620	D8	6.5	6.3	6.3	19.5	19.5	19.5	7.1
5	8	1986	625	D11	7.1	6.9	2.5	19.	19.	19.	7.2
5	8	1986	958	C1	10.6	9.7	8.5	21.	20.	20.	8.7
5	8	1986	1003	C4	9.9	8.7	7.6	21.	20.	19.5	9.
5	8	1986	1006	C6	8.9	8.2	6.7	22.	20.	20.	8.7
5	8	1986	1011	C9	7.9	7.8	7.3	21.	20.5	20.	8.1
5	8	1986	1016	D2	9.4	7.2	6.8	21.	20.	19.5	8.2
5	8	1986	1020	D4	8.8	6.5	6.	21.	20.	19.5	7.3
5	8	1986	1025	D7	8.6	8.2	7.6	21.	20.	20.	7.3
5	8	1986	1029	D8	9.6	6.6	5.3	21.	20.	19.5	7.6
5	8	1986	1034	D11	9.9	6.8	5.3	20.5	19.	19.	7.3
5	8	1986	1340	C1	12.6	12.4	9.3	26.	22.	20.	9.3
5	8	1986	1344	C4	12.6	10.4	6.3	26.	21.5	20.	9.4
5	8	1986	1347	C6	11.8	9.5	4.9	27.	20.5	20.	9.1
5	8	1986	1350	C9	8.6	8.6	7.	26.	21.5	20.5	8.7
5	8	1986	1357	D2	11.8	8.3	5.5	24.5	20.5	20.	9.1
5	8	1986	1402	D4	11.8	7.7	5.3	25.	20.	20.	7.9
5	8	1986	1410	D7	9.6	9.4	8.5	25.	21.	20.	8.1
5	8	1986	1414	D8	11.2	11.	4.6	26.	21.	20.	8.3

Table 4. Diurnal Measurements. Rwanda, Cycle III, Dry Season

			D.O.			WATER TEMP					
DAY	MONTH	YEAR	TIME	POND#	DO-TOP	DO-MID	DO-BOT	TOP	MID	BOT	PH
5	8	1986	1420	D11	12.2	7.6	3.6	26.	20.	19.5	8.2
5	8	1986	1753	C1	12.6	12.2	7.5	26.	21.5	20.	9.4
5	8	1986	1757	C4	13.2	10.8	5.4	20.5	20.2	19.5	9.8
5	8	1986	1803	C6	12.	10.8	4.5	25.5	21.	20.	9.5
5	8	1986	1810	C9	9.	9.	6.7	25.	21.	20.	8.7
5	8	1986	1814	D2	10.8	1.6	1.8	25.	21.	20.	9.3
5	8	1986	1820	D4	9.8	8.2	4.1	25.	20.5	20.	8.6
5	8	1986	1823	D7	9.8	9.5	7.9	25.	21.	20.	8.1
5	8	1986	1825	D8	9.5	8.8	3.9	25.5	21.	20.	8.2
5	8	1986	1830	D11	11.4	7.5	1.6	25.	20.5	19.5	8.9
5	8	1986	2130	C1	11.	9.5	3.1	23.5	21.5	20.	9.3
5	8	1986	2135	C4	11.2	10.6	5.5	23.	21.	20.	9.7
5	8	1986	2140	C6	10.5	9.4	4.3	23.	21.	20.	9.3
5	8	1986	2145	C9	8.3	8.3	5.3	23.	22.	20.5	8.3
5	8	1986	2150	D2	10.5	8.5	1.9	23.	21.5	20.	9.1
5	8	1986	2155	D4	9.	8.5	7.5	23.	21.5	20.	7.8
5	8	1986	2200	D7	9.1	9.1	7.4	23.	21.5	20.	7.8
5	8	1986	2203	D8	8.7	8.2	2.3	23.	21.	20.	8.1
5	8	1986	2210	D11	9.5	7.6	1.7	22.5	21.	19.	8.4
6	8	1986	130	C1	9.7	9.1	1.7	21.5	21.5	20.	9.2
6	8	1986	135	C4	9.9	8.2	2.7	21.	21.	19.5	9.6
6	8	1986	140	C6	8.8	8.5	3.3	21.	21.	20.	9.1
6	8	1986	145	C9	7.1	6.9	4.2	21.	21.	20.	8.5
6	8	1986	150	D2	8.1	7.7	3.1	21.	21.	20.	9.
6	8	1986	155	D4	7.7	6.5	1.1	21.	21.	20.	7.8
6	8	1986	158	D7	7.5	7.5	5.6	21.	21.	20.	7.4
6	8	1986	200	D8	7.8	6.7	2.2	21.	21.	20.	8.1
6	8	1986	205	D11	7.9	6.9	3.6	21.	21.	19.5	7.9
6	8	1986	525	C1	9.1	8.9	8.5	20.5	20.	19.	8.7
6	8	1986	530	C4	8.5	8.	3.5	20.5	20.	20.	9.3
6	8	1986	535	C6	7.1	7.1	5.2	20.	20.	20.	8.2
6	8	1986	540	C9	6.8	6.7	6.7	20.	20.	20.	7.8
6	8	1986	545	D2	7.2	6.8	1.4	20.	20.	20.	8.
6	8	1986	550	D4	6.8	6.6	2.2	20.	20.	20.	7.6
6	8	1986	555	D7	7.3	7.1	7.1	20.	20.	20.	7.5
6	8	1986	600	D8	7.2	7.	4.2	20.	20.	20.	7.4
6	8	1986	605	D11	6.5	6.2	1.9	20.	20.	19.	7.4
19	8	1986	543	C1	8.3	7.9	4.6	19.	19.	19.	8.8
19	8	1986	550	C4	8.	8.	4.	19.	19.	18.5	9.4
19	8	1986	553	C6	8.1	7.9	6.6	19.5	19.	19.	9.2
19	8	1986	557	C9	6.7	6.5	6.3	19.	19.	19.	8.9
19	8	1986	600	D2	8.5	8.5	8.5	19.	19.	19.	9.1
19	8	1986	604	D4	6.8	6.1	6.	19.	19.	19.	7.3
19	8	1986	607	D7	9.9	9.8	9.6	19.	19.	19.	9.
19	8	1986	610	D8	7.3	7.2	7.2	19.	19.	19.	7.4

Table 4. Diurnal Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	D.O.			WATER TEMP			PH		
			TIME	POND#	DO-TOP	DO-MID	DO-BOT	TOP		MID	BOT
19	8	1986	615	D11	6.4	6.3	6.3	19.	19.	19.	7.9
19	8	1986	930	C1	10.4	7.6	6.4	20.	19.	19.	9.3
19	8	1986	940	C4	11.2	7.9	5.4	19.	19.	19.	9.6
19	8	1986	945	C6	9.7	6.9	6.4	20.	20.	19.5	9.2
19	8	1986	950	C9	8.5	7.3	7.1	20.	19.5	19.	8.8
19	8	1986	957	D2	10.9	8.5	7.9	20.	19.5	19.	9.3
19	8	1986	1004	D4	7.8	6.1	5.1	20.5	20.	19.	7.8
19	8	1986	1010	D7	10.6	10.2	9.	21.	20.	19.5	9.1
19	8	1986	1020	D8	8.7	7.2	6.3	20.5	19.5	19.	8.3
19	8	1986	1025	D11	7.3	5.8	5.7	21.	19.	19.	8.6
19	8	1986	1342	C1	13.6	8.4	7.4	25.5	19.5	19.	9.5
19	8	1986	1347	C4	13.4	9.5	5.1	24.5	19.	19.	9.8
19	8	1986	1351	C6	15.2	8.3	7.1	25.	20.5	20.	9.9
19	8	1986	1356	C9	11.6	9.6	7.8	25.	20.	19.5	9.3
19	8	1986	1401	D2	13.2	12.	8.5	25.	20.	19.	9.8
19	8	1986	1405	D4	11.	7.8	5.8	25.	21.	19.5	8.8
19	8	1986	1410	D7	13.4	13.4	9.9	25.	21.	20.	9.6
19	8	1986	1416	D8	11.2	10.2	7.	24.	20.	19.5	9.
19	8	1986	1420	D11	14.4	5.7	5.4	24.5	19.	19.	9.4
19	8	1986	1745	C1	12.2	8.1	5.6	25.5	20.	19.	9.5
19	8	1986	1750	C4	11.8	9.	4.5	25.	20.	19.	9.8
19	8	1986	1755	C6	14.	8.6	4.7	25.	20.5	19.5	9.8
19	8	1986	1758	C9	12.2	8.3	6.5	25.	20.	19.5	9.4
19	8	1986	1800	D2	16.4	9.8	5.8	25.	20.	19.	9.7
19	8	1986	1803	D4	10.8	7.5	3.5	25.	20.5	19.	8.9
19	8	1986	1807	D7	11.8	11.8	6.5	25.	20.5	19.5	9.5
19	8	1986	1810	D8	9.5	8.8	5.8	25.	20.	19.5	8.9
19	8	1986	1815	D11	11.	4.9	4.9	25.	20.	19.	9.3
19	8	1986	2130	C1	11.	7.6	5.5	23.	20.	19.	9.2
19	8	1986	2139	C4	11.8	8.3	3.7	23.	20.	19.	9.5
19	8	1986	2144	C6	12.4	8.1	2.7	23.	21.	20.	9.5
19	8	1986	2149	C9	11.2	8.5	5.5	22.5	21.	19.	9.2
19	8	1986	2155	D2	12.4	9.1	5.	22.5	20.5	19.	9.6
19	8	1986	2200	D4	9.4	6.5	3.6	22.3	20.5	20.	8.3
19	8	1986	2206	D7	11.8	11.8	7.1	23.	21.	20.	9.3
19	8	1986	2210	D8	9.5	9.1	3.2	23.	20.5	19.5	8.4
19	8	1986	2215	D11	11.	4.5	3.9	22.5	20.5	20.	8.9
20	8	1986	136	C1	9.3	7.5	3.	21.	20.	19.	9.1
20	8	1986	142	C4	9.9	7.7	3.1	20.5	20.	19.	9.5
20	8	1986	147	C6	9.7	7.8	1.2	21.	21.	20.	9.4
20	8	1986	150	C9	9.7	8.5	5.1	21.	21.	19.	9.1
20	8	1986	156	D2	10.6	9.2	3.6	21.	21.	19.	9.5
20	8	1986	202	D4	8.	5.6	2.4	20.5	20.5	19.5	8.2
20	8	1986	209	D7	10.2	9.7	5.1	20.5	20.5	19.5	9.1
20	8	1986	213	D8	8.3	8.1	1.4	21.	21.	19.	8.1

Table 4. Diurnal Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	D.O.			WATER TEMP			PH		
			TIME	POND#	DO-TOP	DO-MID	DO-BOT	TOP		MID	BOT
20	8	1986	219	D11	8.3	6.6	2.4	20.5	20.5	20.	8.7
20	8	1986	532	C1	8.4	7.4	6.4	20.	20.	19.5	8.7
20	8	1986	540	C4	8.8	8.4	5.7	19.5	19.5	19.	9.3
20	8	1986	548	C6	8.9	7.8	7.7	20.	20.	19.	9.1
20	8	1986	551	C9	8.5	8.3	3.5	20.	19.5	19.5	8.9
20	8	1986	556	D2	9.3	9.	7.8	19.5	19.5	19.5	9.4
20	8	1986	600	D4	6.2	6.1	6.	19.5	19.5	19.5	7.4
20	8	1986	602	D7	9.7	9.6	9.5	19.5	19.5	19.5	8.9
20	8	1986	606	D8	7.2	7.	3.6	19.5	19.5	19.5	7.5
20	8	1986	610	D11	6.1	6.1	5.9	19.	19.	19.	7.8
2	9	1986	550	C1	5.8	5.7	5.4	20.5	20.5	20.5	7.2
2	9	1986	555	C4	4.8	4.4	3.1	20.5	20.5	20.5	8.3
2	9	1986	558	C6	5.5	5.	5.	20.5	20.5	20.5	8.3
2	9	1986	601	C9	5.	4.9	4.9	20.	20.	20.	8.1
2	9	1986	605	D2	4.4	4.4	4.4	20.5	20.5	20.5	7.1
2	9	1986	609	D4	3.9	3.9	3.9	20.	20.	20.	6.9
2	9	1986	613	D7	4.3	4.3	4.2	20.	20.	20.	7.5
2	9	1986	616	D8	4.6	4.5	4.4	20.	20.	20.	7.
2	9	1986	620	D11	3.7	3.7	3.7	20.	20.	20.	7.2
2	9	1986	940	C1	6.2	4.3	4.1	20.5	20.	20.	7.4
2	9	1986	944	C4	8.5	4.9	4.5	21.	20.5	20.5	9.1
2	9	1986	948	C6	8.5	4.3	4.3	21.	20.5	20.5	8.9
2	9	1986	952	C9	6.5	4.2	4.1	21.	20.	20.	8.6
2	9	1986	956	D2	6.8	4.2	3.8	21.	20.5	20.5	8.1
2	9	1986	1000	D4	6.3	4.	3.1	21.	20.5	20.5	7.6
2	9	1986	1005	D7	5.4	5.3	5.3	21.	20.	20.	7.3
2	9	1986	1008	D8	6.	4.8	4.5	21.	20.5	20.5	7.3
2	9	1986	1012	D11	5.5	4.1	3.9	21.	20.	20.	7.3
2	9	1986	1330	C1	12.2	4.2	2.5	23.	20.5	20.	8.5
2	9	1986	1335	C4	14.4	4.8	2.8	22.5	21.	20.5	9.5
2	9	1986	1339	C6	16.	4.5	3.9	23.	21.	20.5	9.3
2	9	1986	1344	C9	9.4	4.1	3.8	22.5	20.5	20.	8.8
2	9	1986	1348	D2	12.	4.8	3.4	22.5	21.	20.5	8.7
2	9	1986	1353	D4	8.2	3.8	2.	22.	21.	20.5	7.3
2	9	1986	1358	D7	8.	6.	4.5	22.	20.5	20.	7.6
2	9	1986	1403	D8	7.9	5.7	4.4	22.	21.	20.5	7.5
2	9	1986	1408	D11	9.9	3.9	3.3	22.	20.	20.	7.4
2	9	1986	1740	C1	11.8	3.8	3.4	22.5	21.	20.	8.9
2	9	1986	1745	C4	13.	11.	3.2	22.5	22.	21.	9.5
2	9	1986	1750	C6	14.6	5.8	2.9	23.	22.	20.5	9.4
2	9	1986	1754	C9	9.5	5.	3.9	22.5	21.5	20.	9.
2	9	1986	1758	D2	14.	4.	3.1	22.5	21.5	20.5	9.
2	9	1986	1800	D4	9.	4.	1.8	22.	21.5	20.5	7.7
2	9	1986	1805	D7	8.5	6.	4.8	22.	21.5	20.	7.9
2	9	1986	1810	D8	8.2	6.7	1.5	22.	21.5	20.	7.7

Table 4. Diurnal Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	D.O.			WATER TEMP			PH		
			TIME	POND#	DO-TOP	DO-MID	DO-BOT	TOP		MID	BOT
2	9	1986	1815	D11	10.	2.8	2.2	22.	20.5	20.	8.6
2	9	1986	2130	C1	9.7	3.9	3.6	22.	21.	20.	8.8
2	9	1986	2142	C4	9.8	4.7	1.5	22.	21.	20.5	9.4
2	9	1986	2149	C6	10.8	4.1	2.6	22.	21.	20.5	9.2
2	9	1986	2153	C9	7.7	4.1	1.8	21.	20.5	20.	8.8
2	9	1986	2157	D2	11.	4.7	2.	21.	21.	20.5	9.
2	9	1986	2203	D4	7.5	4.1	1.	21.	21.	20.5	7.3
2	9	1986	2210	D7	7.2	5.1	4.5	21.	21.	20.	7.4
2	9	1986	2216	D8	7.3	5.3	0.5	21.5	21.	20.5	7.5
2	9	1986	2222	D11	8.1	3.6	1.3	21.	21.	20.	8.3
3	9	1986	130	C1	8.1	7.7	1.	21.	21.	20.	8.4
3	9	1986	136	C4	8.5	7.8	0.8	21.	21.	20.	9.2
3	9	1986	141	C6	7.9	7.5	0.7	21.	21.	20.	9.1
3	9	1986	145	C9	6.5	5.7	1.5	20.	20.	20.	8.7
3	9	1986	150	D2	7.9	7.7	7.5	21.	21.	20.5	8.5
3	9	1986	157	D4	6.1	5.5	1.	20.5	20.5	20.	7.1
3	9	1986	203	D7	6.5	6.2	4.8	20.	20.	20.	7.2
3	9	1986	207	D8	6.4	6.	0.6	20.5	20.5	20.	7.3
3	9	1986	213	D11	6.8	6.3	0.7	20.	20.	20.	7.8
3	9	1986	530	C1	5.6	5.5	5.5	20.	20.	20.	7.3
3	9	1986	533	C4	6.	6.	5.9	20.	20.	20.	8.7
3	9	1986	540	C6	4.8	4.8	4.8	20.	20.	20.	8.2
3	9	1986	544	C9	4.3	4.3	4.2	20.	20.	20.	7.8
3	9	1986	550	D2	6.1	6.1	6.	20.	20.	20.	7.5
3	9	1986	554	D4	4.	4.	4.	20.	20.	20.	6.9
3	9	1986	600	D7	5.6	5.6	5.5	20.	20.	20.	7.
3	9	1986	607	D8	4.9	4.8	4.4	20.	20.	20.	7.
3	9	1986	611	D11	4.1	4.1	4.	20.	20.	20.	7.2
14	9	1986	545	C1	5.2	5.1	4.7	20.	20.	20.	6.8
14	9	1986	548	C4	5.1	5.	4.7	20.	20.	20.	8.6
14	9	1986	554	C6	5.8	5.5	2.1	20.	20.	20.	8.4
14	9	1986	558	C9	4.1	4.	4.	20.	20.	20.	7.2
14	9	1986	601	D2	4.2	4.2	4.1	20.	20.	20.	7.2
14	9	1986	605	D4	5.5	5.5	5.4	20.5	20.5	20.5	7.
14	9	1986	610	D7	7.4	7.4	7.3	20.	20.	20.	8.3
14	9	1986	614	D8	6.1	6.	6.	20.	20.	20.	7.1
14	9	1986	619	D11	3.7	3.6	3.5	19.5	19.5	19.5	7.1
14	9	1986	940	C1	6.4	4.4	3.8	21.	20.5	20.5	7.1
14	9	1986	946	C4	6.8	4.6	3.5	21.5	20.5	20.	8.8
14	9	1986	951	C6	8.4	5.5	3.4	22.	21.	20.	8.8
14	9	1986	957	C9	5.5	4.	3.5	22.	20.5	20.	7.7
14	9	1986	1001	D2	6.9	4.4	3.4	21.5	20.5	20.	7.9
14	9	1986	1006	D4	7.5	6.2	4.4	22.	21.	20.5	7.6
14	9	1986	1013	D7	9.1	7.	6.5	22.	20.5	20.	8.7
14	9	1986	1018	D8	10.4	7.	5.5	22.	20.5	20.	8.4

Table 4. Diurnal Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	D.O.			WATER TEMP			PH		
			TIME	POND#	DO-TOP	DO-MID	DO-BOT	TEMP TOP		TEMP MID	TEMP BOT
14	9	1986	1024	D11	7.	4.7	2.9	22.	20.	19.5	7.7
14	9	1986	1330	C1	10.8	7.	3.6	26.	22.5	20.5	7.4
14	9	1986	1337	C4	12.2	7.1	3.9	26.	21.5	20.5	9.
14	9	1986	1342	C6	15.6	7.5	4.	25.	21.5	20.5	9.1
14	9	1986	1345	C9	6.4	4.	3.5	23.	20.5	20.	8.1
14	9	1986	1350	D2	10.8	7.3	3.	25.	21.5	20.5	8.3
14	9	1986	1354	D4	10.2	9.8	5.6	26.	23.	21.	8.2
14	9	1986	1400	D7	13.	8.2	6.	26.	21.	20.5	8.9
14	9	1986	1405	D8	15.4	7.6	5.2	25.5	21.	20.5	8.8
14	9	1986	1411	D11	10.	6.1	2.1	26.	21.5	20.	8.4
14	9	1986	1745	C1	10.8	4.2	2.	26.	21.	20.5	7.9
14	9	1986	1750	C4	13.2	4.3	1.	26.	21.	20.5	9.6
14	9	1986	1800	C6	16.2	6.2	1.5	25.5	21.5	20.	9.8
14	9	1986	1804	C9	8.	3.7	3.2	20.5	20.5	20.	8.4
14	9	1986	1808	D2	9.	6.2	2.	25.	21.	20.	9.1
14	9	1986	1813	D4	10.4	7.3	3.1	25.	22.	21.	8.9
14	9	1986	1817	D7	12.2	9.	5.2	25.	21.	20.	9.6
14	9	1986	1820	D8	14.4	7.9	3.7	25.	21.	20.5	9.5
14	9	1986	1825	D11	8.1	4.7	1.3	25.	22.5	20.	8.2
14	9	1986	2130	C1	8.4	4.2	0.8	24.	22.5	20.5	7.1
14	9	1986	2136	C4	10.	4.2	0.4	24.	21.	20.5	9.1
14	9	1986	2140	C6	6.	5.3	1.2	23.5	22.	20.	9.2
14	9	1986	2143	C9	6.7	2.7	2.4	23.	20.5	20.	7.6
14	9	1986	2150	D2	8.	5.3	0.7	23.	20.	20.	8.
14	9	1986	2157	D4	8.7	7.	3.	23.5	22.	21.	7.9
14	9	1986	2204	D7	9.8	8.6	4.5	23.	22.	20.	9.
14	9	1986	2208	D8	11.4	6.1	2.5	23.	21.5	20.	8.8
14	9	1986	2215	D11	6.6	6.1	0.5	23.	22.5	20.	7.3
15	9	1986	130	C1	7.	6.5	0.3	23.5	22.	20.3	6.9
15	9	1986	135	C4	7.2	4.4	0.2	22.	21.5	20.	8.8
15	9	1986	140	C6	8.7	6.4	0.6	22.	21.5	20.	9.
15	9	1986	143	C9	6.2	5.	0.9	21.5	21.	21.	7.6
15	9	1986	146	D2	6.1	5.8	0.7	21.5	21.5	20.	7.7
15	9	1986	152	D4	8.	7.4	1.9	22.	22.	20.5	7.8
15	9	1986	155	D7	9.	8.	4.	21.5	21.5	20.	8.8
15	9	1986	201	D8	9.2	7.5	2.3	21.5	21.5	20.	8.4
15	9	1986	210	D11	5.5	5.2	0.3	22.	22.	20.	7.
15	9	1986	530	C1	5.9	5.6	0.4	21.	21.	20.	6.8
15	9	1986	536	C4	5.5	5.1	0.4	21.	21.	20.	8.4
15	9	1986	540	C6	6.9	6.5	0.4	21.	21.	20.	8.6
15	9	1986	545	C9	4.6	4.5	0.8	20.	20.	20.	7.2
15	9	1986	550	D2	4.2	4.2	4.1	20.5	20.5	20.5	7.2
15	9	1986	555	D4	6.7	6.4	3.7	21.	21.	21.	7.2
15	9	1986	559	D7	8.	7.6	2.	20.5	20.5	20.	8.2
15	9	1986	604	D8	7.	6.7	4.5	20.5	20.5	20.5	7.4

Table 4. Diurnal Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	D.O.		DO			WATER	WATER	WATER	PH
			TIME	POND#	DO-TOP	DO-MID	DO-BOT	TEMP TOP	TEMP MID	TEMP BOT	
15	9	1986	610	D11	4.1	4.1	0.7	21.	21.	20.5	6.9
30	9	1986	545	C1	5.5	5.2	1.4	20.	20.	20.	7.3
30	9	1986	550	C4	6.1	2.8	0.6	21.	21.	19.5	8.7
30	9	1986	554	C6	6.9	6.	0.7	21.	21.	21.	8.
30	9	1986	558	C9	5.5	4.1	1.2	20.	20.	20.	7.9
30	9	1986	603	D2	5.	4.8	4.3	20.5	20.5	20.5	7.3
30	9	1986	607	D4	5.8	4.1	4.	21.	21.	21.	7.1
30	9	1986	611	D7	6.3	5.9	1.1	20.	20.	20.	8.1
30	9	1986	615	D8	7.3	2.8	2.8	21.	21.	21.	7.
30	9	1986	620	D11	5.6	5.	1.	20.	20.	20.	7.3
30	9	1986	930	C1	7.4	4.6	3.8	21.5	20.	20.	7.1
30	9	1986	938	C4	10.8	7.	0.4	21.5	21.	20.	8.7
30	9	1986	943	C6	7.7	5.1	1.7	22.	21.	20.5	8.
30	9	1986	947	C9	7.2	4.2	1.	21.	20.	20.	7.6
30	9	1986	954	D2	8.2	5.5	4.4	21.5	21.	20.5	7.6
30	9	1986	958	D4	7.7	5.6	3.5	22.	21.5	21.	7.1
30	9	1986	1003	D7	9.5	6.	1.7	22.	20.5	20.	8.4
30	9	1986	1008	D8	5.2	3.8	2.	22.	21.5	21.	6.8
30	9	1986	1009	D11	7.3	4.8	1.3	22.	20.5	20.	7.3
30	9	1986	1330	C1	11.4	6.8	2.9	24.5	21.	20.	8.
30	9	1986	1335	C4	15.8	5.9	0.3	24.	21.	20.	8.9
30	9	1986	1342	C6	14.2	4.8	0.4	24.5	21.5	20.5	8.4
30	9	1986	1347	C9	7.2	4.5	1.3	24.	20.5	20.	7.6
30	9	1986	1352	D2	10.8	5.1	1.6	24.	21.	20.5	7.7
30	9	1986	1358	D4	9.4	6.3	1.9	24.	22.	21.	7.1
30	9	1986	1405	D7	13.8	5.7	1.2	25.	21.	20.	8.2
30	9	1986	1410	D8	7.5	4.4	1.2	24.5	22.	21.5	6.8
30	9	1986	1417	D11	9.5	4.8	0.4	25.	21.	20.	7.4
30	9	1986	1740	C1	13.	5.	1.6	25.	21.	20.	8.
30	9	1986	1745	C4	17.	4.8	0.7	25.	21.	20.	9.3
30	9	1986	1750	C6	17.5	4.5	0.4	25.	21.5	20.5	9.1
30	9	1986	1805	C9	11.2	4.8	1.	24.5	21.	20.	8.4
30	9	1986	1810	D2	10.4	3.5	0.6	24.5	21.5	21.	7.9
30	9	1986	1812	D4	9.6	4.	1.5	24.	22.	21.	7.5
30	9	1986	1818	D7	14.	5.8	0.8	24.5	21.	20.	8.6
30	9	1986	1822	D8	7.7	3.5	0.5	24.	23.	21.5	7.
30	9	1986	1826	D11	8.8	3.8	0.3	24.	21.	20.	7.8
30	9	1986	2130	C1	10.8	6.	0.5	23.	21.5	20.5	7.6
30	9	1986	2135	C4	13.8	4.6	0.2	22.5	21.	20.	9.3
30	9	1986	2140	C6	13.2	6.2	0.5	22.5	22.	20.	9.1
30	9	1986	2146	C9	8.9	3.	0.3	22.	20.	20.	8.4
30	9	1986	2151	D2	8.7	4.4	0.7	22.	21.	20.5	7.9
30	9	1986	2155	D4	7.	5.	1.	22.	22.	21.	7.5
30	9	1986	2200	D7	11.2	4.5	0.5	22.	21.	20.	8.8
30	9	1986	2205	D8	5.5	5.4	0.3	22.	22.	21.	7.

Table 4. Diurnal Measurements. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	D.O. TIME POND#	DO-TOP	DO-MID	DO-BOT	WATER	WATER	WATER	PH	
							TEMP	TEMP	TEMP		
							TOP	MID	BOT		
30	9	1986	2211 D11	8.	4.1	0.4	22.	21.	20.	7.7	
1	10	1986	130 C1	7.7	6.1	0.4	21.	21.	20.	7.3	
1	10	1986	135 C4	9.4	4.1	0.4	21.	21.	20.	9.	
1	10	1986	139 C6	8.7	8.4	0.3	21.5	21.5	20.5	8.8	
1	10	1986	144 C9	6.7	6.5	0.3	20.5	20.5	20.	8.3	
1	10	1986	150 D2	6.4	6.2	1.4	21.	21.	20.5	7.6	
1	10	1986	155 D4	4.8	4.8	4.7	21.	21.	21.	7.	
1	10	1986	200 D7	8.4	8.	1.2	21.	21.	20.	8.4	
1	10	1986	209 D8	3.3	3.3	3.1	21.5	21.5	21.5	6.8	
1	10	1986	215 D11	6.1	5.	0.2	21.	21.	20.	7.3	
1	10	1986	530 C1	4.9	4.9	4.7	20.	20.	20.	6.8	
1	10	1986	535 C4	6.4	6.	0.2	20.	20.	20.	8.6	
1	10	1986	540 C6	6.	5.6	1.8	20.5	20.5	20.5	8.1	
1	10	1986	544 C9	4.9	4.7	4.6	20.	20.	20.	7.5	
1	10	1986	549 D2	4.6	4.6	4.6	20.	20.	20.	7.	
1	10	1986	553 D4	3.8	3.8	3.7	21.	21.	21.	6.8	
1	10	1986	558 D7	5.6	5.3	5.2	20.	20.	20.	7.3	
1	10	1986	604 D8	2.1	2.1	2.	21.	21.	21.	6.6	
1	10	1986	610 D11	4.3	4.3	4.2	20.	20.	20.	7.	
14	10	1986	545 C1	2.6	2.6	2.6	21.	21.	21.	6.6	
14	10	1986	550 C4	2.	2.	2.	21.	21.	21.	7.2	
14	10	1986	553 C6	0.5	0.5	0.5	21.	21.	21.	6.8	
14	10	1986	557 C9	2.4	2.4	2.4	20.5	20.5	20.5	6.9	
14	10	1986	600 D2	1.2	1.2	1.2	21.	21.	21.	6.7	
14	10	1986	605 D4	3.	3.	3.	21.5	21.5	21.5	6.6	
14	10	1986	608 D7	2.1	2.1	2.1	21.	21.	21.	6.6	
14	10	1986	612 D8	1.3	1.3	1.3	21.	21.	21.	6.5	
14	10	1986	616 D11	2.1	2.1	2.1	21.5	21.5	21.5	6.8	
14	10	1986	932 C1	5.2	2.1	1.5	22.	21.5	21.	6.7	
14	10	1986	937 C4	4.7	1.5	0.4	21.5	21.	21.	8.1	
14	10	1986	950 C6	4.4	0.8	0.3	22.	21.5	21.5	7.2	
14	10	1986	958 C9	3.7	2.4	2.1	21.	21.	20.5	7.	
14	10	1986	1002 D2	4.8	0.7	0.2	22.	21.	21.	7.	
14	10	1986	1006 D4	5.8	3.2	2.1	22.	22.	21.5	7.	
14	10	1986	1013 D7	3.9	1.6	0.9	22.	21.	21.	6.9	
14	10	1986	1020 D8	7.1	1.5	0.4	22.5	22.	21.5	6.8	
14	10	1986	1024 D11	7.9	3.5	1.	23.5	22.	21.5	7.3	
14	10	1986	1330 C1	9.8	4.5	1.2	24.	22.	21.5	7.3	
14	10	1986	1336 C4	11.	2.9	0.7	23.5	22.	21.	8.9	
14	10	1986	1342 C6	11.4	5.7	0.3	24.	22.5	21.5	8.6	
14	10	1986	1345 C9	8.	2.1	1.7	24.	21.	20.5	7.5	
14	10	1986	1349 D2	7.7	0.6	0.4	24.	21.5	21.	7.1	
14	10	1986	1354 D4	8.7	4.1	1.4	24.	22.	21.5	7.1	
14	10	1986	1358 D7	7.6	1.4	0.5	24.	21.5	21.	6.9	
14	10	1986	1402 D8	6.8	1.	0.1	24.	22.	21.5	6.8	

Table 5. Fish/Shrimp Stocking, Sampling, and Harvesting. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND	ACTIVITY	SPECIES	POP. WEIGHT	POP. NUMBER	SAMPLE WEIGHT	SAMPLE WT.-#	SAMPLE WT.-SD	SAMPLE LENGTH	SAMPLE LT.-#	SAMPLE LT.-SD	REPROD. WEIGHT	REPROD. NUMBER
3	12	1986	C1	SAM	nil			141.	25	17.9	19.4	25	0.95	0.	7.
3	12	1986	C4	SAM	nil			197.	25	26.6	21.4	25	0.97	0.	1.
3	12	1986	C6	SAM	nil			171.	25	20.2	20.8	25	1.05	0.	0.
3	12	1986	C9	SAM	nil			91.	25	11.3	16.6	25	0.76	0.1	26.
3	12	1986	D11	SAM	nil			152.	25	29.5	19.9	25	1.29	0.	0.
3	12	1986	D2	SAM	nil			132.	25	21.8	18.9	25	1.22	0.	12.
3	12	1986	D4	SAM	nil			113.	25	24.7	18.	25	1.41	0.	0.
3	12	1986	D7	SAM	nil			94.	25	19.9	16.7	25	1.31	0.	6.
3	12	1986	D8	SAM	nil			124.	25	22.5	18.7	25	1.34	0.	0.
4	12	1986	C1	HAR	nil	77.3	556							1.5	243.
4	12	1986	C4	HAR	nil	100.3	530							0.	2.
4	12	1986	C6	HAR	nil	85.9	538							0.1	9.
4	12	1986	C9	HAR	nil	43.1	537							0.6	230.
4	12	1986	D11	HAR	nil	75.4	557							0.2	28.
4	12	1986	D2	HAR	nil	72.	540							2.4	747.
4	12	1986	D4	HAR	nil	60.1	558							0.	0.
4	12	1986	D7	HAR	nil	50.7	517							0.5	83.
4	12	1986	D8	HAR	nil	61.2	554							0.4	106.

Table 5. Fish/Shrimp Stocking, Sampling, and Harvesting. Rwanda, Cycle III, Wet Season

DAY	MONTH	YEAR	POND	ACTIVITY	SPECIES	POP. WEIGHT	POP. NUMBER	SAMPLE WEIGHT	SAMPLE WT.-#	SAMPLE WT.-SD	SAMPLE LENGTH	SAMPLE LT.-#	SAMPLE LT.-SD	REPROD. WEIGHT	REPROD. NUMBER
14	5	1986	C1	SAM	nil			75.	25	6.8	15.6	25	0.65	2.1	480.
14	5	1986	C4	SAM	nil			107.	25	13.4	17.6	25	0.76	6.8	1210.
14	5	1986	C6	SAM	nil			92.	25	7.9	17.6	25	0.58	2.1	652.
14	5	1986	C9	SAM	nil			47.	25	7.	13.8	25	1.04	0.5	94.
14	5	1986	D11	SAM	nil			80.	25	10.5	16.8	25	1.09	1.4	406.
14	5	1986	D2	SAM	nil			78.	25	10.	16.6	25	0.77	1.3	437.
14	5	1986	D4	SAM	nil			65.	25	8.2	15.3	25	0.74	0.5	130.
14	5	1986	D7	SAM	nil			59.	25	11.8	14.9	25	1.	1.7	422.
14	5	1986	D8	SAM	nil			67.	25	8.9	15.8	25	0.78	1.6	380.
15	5	1986	C1	HAR	nil	32.1	513	70.	25	6.8	15.6	25	0.65	1.2	613.
15	5	1986	C4	HAR	nil	43.7	486	100.	25	13.4	17.6	25	0.76	1.9	726.
15	5	1986	C6	HAR	nil	34.4	469	86.	25	7.9	17.6	25	0.58	2.	973.
15	5	1986	C9	HAR	nil	21.4	507	46.	25	7.	13.8	25	1.04	0.2	268.
15	5	1986	D11	HAR	nil	30.6	464	77.	25	10.5	16.8	25	1.09	0.6	266.
15	5	1986	D2	HAR	nil	28.4	392	76.	25	10.	16.6	25	0.77	0.9	397.
15	5	1986	D4	HAR	nil	22.7	428	61.	25	8.2	15.3	25	0.74	0.4	190.
15	5	1986	D7	HAR	nil	21.9	459	54.	25	11.8	14.9	25	1.	2.1	540.
15	5	1986	D8	HAR	nil	27.5	489	64.	25	8.9	15.8	25	0.78	1.1	427.

Table 6. Plankton and Benthos. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	NET PRODUCTN	GROSS PRODUCTN	BLUE- GREEN	GREEN	DIATOM	OTHER PHYTO.	ROTIFE	CLADOC	COPEPO	OTHER ZOOPL.
12	11	1986	C4	567.									
12	11	1986	C6	1079.									
12	11	1986	C9	165.									
12	11	1986	D11	126.									
12	11	1986	D2	308.									
12	11	1986	D4	2203.									
12	11	1986	D7	1153.									
12	11	1986	D8	598.									
25	11	1986	C1			3	3	3	2	2	1	2	2
25	11	1986	C4			3	2	2	3	3	2	2	2
25	11	1986	C6			3	2	1	2	2	2	2	2
25	11	1986	C9			3	2	2	2	2	1	2	2
25	11	1986	D2			3	3	3	2	2	2	2	2
25	11	1986	D4			3	3	3	2	2	1	1	2
25	11	1986	D7			3	2	2	2	2	1	1	2
25	11	1986	D8			3	3	3	2	2	1	1	1

Table 6. Plankton and Benthos. Rwanda, Cycle III, Wet Season

DAY	MONTH	YEAR	POND#	NET PRODUCTN
20	1	1986	C1	269.
20	1	1986	C4	651.
20	1	1986	C6	1084.
20	1	1986	C9	636.
20	1	1986	D11	818.
20	1	1986	D2	616.
20	1	1986	D4	511.
20	1	1986	D7	37.
20	1	1986	D8	0.
24	2	1986	C1	753.
24	2	1986	C4	759.
24	2	1986	C6	908.
24	2	1986	C9	636.
24	2	1986	D11	387.
24	2	1986	D2	878.
24	2	1986	D4	300.
24	2	1986	D7	529.
24	2	1986	D8	921.
17	3	1986	C1	2056.
17	3	1986	C4	2063.
17	3	1986	C6	868.
17	3	1986	C9	681.
17	3	1986	D11	1653.
17	3	1986	D2	1184.
17	3	1986	D4	1053.
17	3	1986	D7	1250.
17	3	1986	D8	1053.
15	4	1986	C1	807.
15	4	1986	C4	1054.
15	4	1986	C6	929.
15	4	1986	C9	797.
15	4	1986	D11	1520.
15	4	1986	D2	1159.
15	4	1986	D4	641.
15	4	1986	D7	892.
15	4	1986	D8	730.
13	5	1986	C1	1290.
13	5	1986	C4	2417.
13	5	1986	C6	1632.
13	5	1986	C9	711.
13	5	1986	D11	1372.
13	5	1986	D2	1768.
13	5	1986	D4	1102.
13	5	1986	D7	923.
13	5	1986	D8	950.

Table 7. Water Quality Characteristics. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	ALKALIN	HARDNESS	PH	NH3-N	NO2-N	NO3-N	NO2&3-N	TOTAL-P	ORTHO-P
4	7	1986	C1	20.	77.	6.9	0.16		0.12		0.05	0.
4	7	1986	C4	31.	103.	8.3	0.03		0.12		0.08	0.
4	7	1986	C6	29.	83.	7.2	0.		0.09		0.09	0.
4	7	1986	C9	27.	90.	7.5	0.03		0.29		0.03	0.
4	7	1986	D11	21.	64.	7.1	0.08		0.21		0.1	0.01
4	7	1986	D2	22.	83.	7.4	0.13		0.09		0.05	0.
4	7	1986	D4	23.	77.	7.2	0.14		0.09		0.03	0.
4	7	1986	D7	21.	51.	7.1	0.13		0.09		0.07	0.
4	7	1986	D8	22.	64.	7.1	0.		0.11		0.06	0.
2	12	1986	C1	42.	77.	6.8	0.03		0.15		0.23	0.01
2	12	1986	C4	42.	83.	7.	0.08		0.2		0.5	0.05
2	12	1986	C6	54.	103.	7.2	0.016		0.13		0.37	0.04
2	12	1986	C9	43.	83.	7.1	0.13		0.28		0.29	0.05
2	12	1986	D11	35.	77.	8.5	0.03		0.23		0.7	0.1
2	12	1986	D2	44.	77.	6.9	0.07		0.19		0.52	0.05
2	12	1986	D4	49.	83.	7.	0.03		0.09		0.17	0.01
2	12	1986	D7	43.	77.	7.	0.03		0.09		0.16	0.01
2	12	1986	D8	40.	83.	6.8	0.05		0.14		0.2	0.03

Table 7. Water Quality Characteristics. Rwanda, Cycle III, Wet Season

DAY	MONTH	YEAR	POND#	ALKALIN	HARDNESS	PH	NH3-N	NO2-N	NO3-N	NO2&3-N	TOTAL-P	ORTHO-P
24	12	1985	C1	42.	50.	8.5	0.08		0.12		0.12	0.02
24	12	1985	C4	38.	45.	8.9	0.26		0.07		0.18	0.02
24	12	1985	C6	40.	50.	8.8	0.21		0.17		0.21	0.02
24	12	1985	C9	51.	51.	9.2	0.21		0.07		0.12	0.01
24	12	1985	D11	69.	60.	8.4	0.11		0.12		0.17	0.02
24	12	1985	D2	50.	53.	8.8	0.28		0.06		0.15	0.01
24	12	1985	D4	60.	66.	7.7	0.16		0.07		0.1	0.02
24	12	1985	D7	45.	51.	8.7	0.09		0.06		0.08	0.01
24	12	1985	D8	58.	60.	8.3	0.11		0.06		0.11	0.02
13	5	1986	C1	30.	141.	7.5	0.19		0.08		0.2	0.02
13	5	1986	C4	58.	141.	7.6	0.06		0.1		0.38	0.04
13	5	1986	C6	57.	109.	7.4	0.14		0.05		0.3	0.02
13	5	1986	C9	42.	135.	7.5	0.17		0.03		0.14	0.01
13	5	1986	D11	45.	96.	7.2	0.13		0.05		0.37	0.02
13	5	1986	D2	41.	141.	7.6	0.12		0.07		0.38	0.04
13	5	1986	D4	54.	128.	7.1	0.01		0.05		0.1	0.01
13	5	1986	D7	38.	122.	7.1	0.		0.03		0.1	0.01
13	5	1986	D8	55.	128.	7.4	0.14		0.04		0.2	0.02

Table 10. Analysis of Nutrients and Lime. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	NUTRIENT TYPE	DRY MATTER %					LIME		
				N	P	K	ORG-C	S	NEUT %		
21	3	1986	CHICK	55.	1.1	0.2	0.3	15.5			

Table 10. Analysis of Nutrients and Lime. Rwanda, Cycle III, Wet Season

DAY	MONTH	YEAR	NUTRIENT TYPE	DRY MATTER %					LIME		
				N	P	K	ORG-C	S	NEUT %		
13	11	1986	CHICK	52.8	0.3			10.6			

Table 11. Nutrient and Lime Inputs. Rwanda, Cycle III, Dry Season

JAY	MONTH	YEAR	POND#	FEED TYPE	FEED QUANTITY	MANURE TYPE	MANURE QUANTITY
16	7	1986	C1			CHICK	30.
16	7	1986	C4			CHICK	60.
16	7	1986	C6			CHICK	60.
16	7	1986	C9			CHICK	15.
16	7	1986	D11			CHICK	60.
16	7	1986	D2			CHICK	30.
16	7	1986	D4			CHICK	15.
16	7	1986	D7			CHICK	15.
16	7	1986	D8			CHICK	30.
23	7	1986	C1			CHICK	30.
23	7	1986	C4			CHICK	60.
23	7	1986	C6			CHICK	60.
23	7	1986	C9			CHICK	15.
23	7	1986	D11			CHICK	60.
23	7	1986	D2			CHICK	30.
23	7	1986	D4			CHICK	15.
23	7	1986	D7			CHICK	15.
23	7	1986	D8			CHICK	30.
30	7	1986	C1			CHICK	30.
30	7	1986	C4			CHICK	60.
30	7	1986	C6			CHICK	60.
30	7	1986	C9			CHICK	15.
30	7	1986	D11			CHICK	60.
30	7	1986	D2			CHICK	30.
30	7	1986	D4			CHICK	15.
30	7	1986	D7			CHICK	15.
30	7	1986	D8			CHICK	30.
6	8	1986	C1			CHICK	30.
6	8	1986	C4			CHICK	60.
6	8	1986	C6			CHICK	60.
6	8	1986	C9			CHICK	15.
6	8	1986	D11			CHICK	60.
6	8	1986	D2			CHICK	30.
6	8	1986	D4			CHICK	15.
6	8	1986	D7			CHICK	15.
6	8	1986	D8			CHICK	30.
13	8	1986	C1			CHICK	30.
13	8	1986	C4			CHICK	60.
13	8	1986	C6			CHICK	60.
13	8	1986	C9			CHICK	15.
13	8	1986	D11			CHICK	60.
13	8	1986	D2			CHICK	30.
13	8	1986	D4			CHICK	15.
13	8	1986	D7			CHICK	15.
13	8	1986	D8			CHICK	30.
27	8	1986	C1			CHICK	30.
27	8	1986	C4			CHICK	60.
27	8	1986	C6			CHICK	60.
27	8	1986	C9			CHICK	15.
27	8	1986	D11			CHICK	60.
27	8	1986	D2			CHICK	30.
27	8	1986	D4			CHICK	15.
27	8	1986	D7			CHICK	15.
27	8	1986	D8			CHICK	30.
3	9	1986	C1			CHICK	30.
3	9	1986	C4			CHICK	60.
3	9	1986	C6			CHICK	60.
3	9	1986	C9			CHICK	15.
3	9	1986	D11			CHICK	60.
3	9	1986	D2			CHICK	30.
3	9	1986	D4			CHICK	15.
3	9	1986	D7			CHICK	15.
3	9	1986	D8			CHICK	30.
10	9	1986	C1			CHICK	30.
10	9	1986	C4			CHICK	60.
10	9	1986	C6			CHICK	60.
10	9	1986	C9			CHICK	15.
10	9	1986	D11			CHICK	60.
10	9	1986	D2			CHICK	30.
10	9	1986	D4			CHICK	15.
10	9	1986	D7			CHICK	15.

Table 11. Nutrient and Lime Inputs. Rwanda, Cycle III, Dry Season

DAY	MONTH	YEAR	POND#	FEED TYPE	FEED QUANTITY	MANURE TYPE	MANURE QUANTITY
10	9	1986	D8			CHICK	30.
17	9	1986	C1			CHICK	30.
17	9	1986	C4			CHICK	60.
17	9	1986	C6			CHICK	60.
17	9	1986	C9			CHICK	15.
17	9	1986	D11			CHICK	60.
17	9	1986	D2			CHICK	30.
17	9	1986	D4			CHICK	15.
17	9	1986	D7			CHICK	15.
17	9	1986	D8			CHICK	30.
1	10	1986	C1			CHICK	30.
1	10	1986	C4			CHICK	60.
1	10	1986	C6			CHICK	60.
1	10	1986	C9			CHICK	15.
1	10	1986	D11			CHICK	60.
1	10	1986	D2			CHICK	30.
1	10	1986	D4			CHICK	15.
1	10	1986	D7			CHICK	15.
1	10	1986	D8			CHICK	30.
8	10	1986	C1			CHICK	30.
8	10	1986	C4			CHICK	60.
8	10	1986	C6			CHICK	60.
8	10	1986	C9			CHICK	15.
8	10	1986	D11			CHICK	60.
8	10	1986	D2			CHICK	30.
8	10	1986	D4			CHICK	15.
8	10	1986	D7			CHICK	15.
8	10	1986	D8			CHICK	30.
15	10	1986	C1			CHICK	30.
15	10	1986	C4			CHICK	60.
15	10	1986	C6			CHICK	60.
15	10	1986	C9			CHICK	15.
15	10	1986	D11			CHICK	60.
15	10	1986	D2			CHICK	30.
15	10	1986	D4			CHICK	15.
15	10	1986	D7			CHICK	15.
15	10	1986	D8			CHICK	30.
22	10	1986	C1			CHICK	30.
22	10	1986	C4			CHICK	60.
22	10	1986	C6			CHICK	60.
22	10	1986	C9			CHICK	15.
22	10	1986	D11			CHICK	60.
22	10	1986	D2			CHICK	30.
22	10	1986	D4			CHICK	15.
22	10	1986	D7			CHICK	15.
22	10	1986	D8			CHICK	30.
29	10	1986	C1			CHICK	30.
29	10	1986	C4			CHICK	60.
29	10	1986	C6			CHICK	60.
29	10	1986	C9			CHICK	15.
29	10	1986	D11			CHICK	60.
29	10	1986	D2			CHICK	30.
29	10	1986	D4			CHICK	15.
29	10	1986	D7			CHICK	15.
29	10	1986	D8			CHICK	30.
4	11	1986	C1			CHICK	30.
4	11	1986	C4			CHICK	60.
4	11	1986	C6			CHICK	60.
4	11	1986	C9			CHICK	15.
4	11	1986	D11			CHICK	60.
4	11	1986	D2			CHICK	30.
4	11	1986	D4			CHICK	15.
4	11	1986	D7			CHICK	15.
4	11	1986	D8			CHICK	30.
19	11	1986	C1			CHICK	30.
19	11	1986	C4			CHICK	60.
19	11	1986	C6			CHICK	60.
19	11	1986	C9			CHICK	15.
19	11	1986	D11			CHICK	60.
19	11	1986	D2			CHICK	30.
19	11	1986	D4			CHICK	15.
19	11	1986	D7			CHICK	15.
19	11	1986	D8			CHICK	30.

Table 11. Nutrient and Lime Inputs. Rwanda, Cycle III, Wet Season

DAY	MONTH	YEAR	POND#	FEED TYPE	FEED QUANTITY	MANURE TYPE	MANURE QUANTITY
3	4	1986	D8			CHICK	250.
10	4	1986	C1			CHICK	250.
10	4	1986	C4			CHICK	500.
10	4	1986	C6			CHICK	500.
10	4	1986	C9			CHICK	125.
10	4	1986	D11			CHICK	500.
10	4	1986	D2			CHICK	250.
10	4	1986	D4			CHICK	125.
10	4	1986	D7			CHICK	125.
10	4	1986	D8			CHICK	250.
16	4	1986	C1			CHICK	250.
16	4	1986	C4			CHICK	500.
16	4	1986	C6			CHICK	500.
16	4	1986	C9			CHICK	125.
16	4	1986	D11			CHICK	500.
16	4	1986	D2			CHICK	250.
16	4	1986	D4			CHICK	125.
16	4	1986	D7			CHICK	125.
16	4	1986	D8			CHICK	250.
23	4	1986	C1			CHICK	250.
23	4	1986	C4			CHICK	500.
23	4	1986	C6			CHICK	500.
23	4	1986	C9			CHICK	125.
23	4	1986	D11			CHICK	500.
23	4	1986	D2			CHICK	250.
23	4	1986	D4			CHICK	125.
23	4	1986	D7			CHICK	125.
23	4	1986	D8			CHICK	250.
30	4	1986	C1			CHICK	250.
30	4	1986	C4			CHICK	500.
30	4	1986	C6			CHICK	500.
30	4	1986	C9			CHICK	125.
30	4	1986	D11			CHICK	500.
30	4	1986	D2			CHICK	250.
30	4	1986	D4			CHICK	125.
30	4	1986	D7			CHICK	125.
30	4	1986	D8			CHICK	250.
7	5	1986	C1			CHICK	250.
7	5	1986	C4			CHICK	500.
7	5	1986	C6			CHICK	500.
7	5	1986	C9			CHICK	125.
7	5	1986	D11			CHICK	500.
7	5	1986	D2			CHICK	250.
7	5	1986	D4			CHICK	125.
7	5	1986	D7			CHICK	125.
7	5	1986	D8			CHICK	250.

